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ABSTRACT

This document contains summaries of five workshops, each with several speakers, held at a conference on competency-based training (CBT) in Australia. The following are included in Session 1, Developing and Delivering CBT Programs: "Developing and Delivering CBT Programs--Opening Speech" (Steve McDonald); "Competency Standards and the CBT System" (Peter Hannigan); "CBT--Will Employers Participate?" (Brian Conroy); and "A Brief Overview of the ACTU (Australian Council of Trade Unions) Policy on CBT" (Jane Carnegie). In Session 2, Developing Competency Standards 1, are the following: "CBT: The Problems" (Peter Thomson); "Taking the Mystique out of CBT" (Percy Worsnop); "Nationally Consistent Practices" (John Nathan); "A Competency-based Trade Training Program" (Ian Neeson); "CBT Awareness Program for Employers of Apprentice Cooks" (Terry Dwan); "Alternative Delivery Systems with Regard to the National Training Reform Agenda" (Bob Mulcahy); and "Multi-media Project" (Mal Chisholm). The following papers are in Session 3, Developing Competency Standards 2: "Role of the Competency Standards Bodies (CSBs)" (Percy Worsnop); "Clerks' Training Model Project" (Clarice Ballenden); "Competency-based Training in the APS (Australian Public Service)" (Diane Paton); "Social and Community Services Competency Methodology Project" (Cathy Emery); and "Feasibility of Expressing Generic Management Skills as Competencies" (Billie Slater). Session 4, Training Programs in CBT, contains the following presentation: "The Provision of Training in the Delivery and Assessment of Competency-based Training" (Hugh Guthrie, Doug Gilham). Papers in Session 4, Assessment and Recognition, are as follows: "Assessment Models Appropriate for CBT and Their Relationship to Teaching and Learning Approaches" (John Whiteley, John Dungan); "Assessment in the Workplace: Challenges Ahead" (Leigh Toop); "Clerks' Training Model Project and Associated Projects on Assessment" (Janet Scarfe); "Guidelines for Assessing Affective Skills" (Ray Orr, Stephen Billett); "Industry Assessors Project" (Sally Davis); "Social Justice Implications for the Delivery of CBT" (Shirley Evans); and "Transition Assessment Arrangements and Developments for the Building and Construction Industry" (Joseph Zonneveldt). A list of the 40 conference participants and their affiliations is included in the document. (KC)

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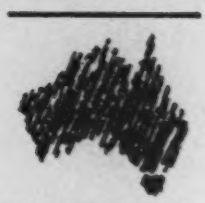

NATIONAL CENTRE FOR COMPETENCY BASED TRAINING

TAFE

TAFE NATIONAL CENTRE FOR RESEARCH AND DEVELOPMENT
A.C.N. 007 967 311

Proceedings of the conference on competency-based training

held at the National Centre for Competency Based Training 27-29 November 1991

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Contents

Introduction 1

Workshop summaries 3

Session 1 - Developing and delivering CBT programs

Steve McDonald - *Developing and delivering CBT programs - opening speech* 7
Peter Hannigan - *Competency standards and the CBT system* 10
Brian Conroy - *CBT - will employers participate?* 13
Jane Carnegie - *A brief overview of the ACTU policy on CBT* 16

Session 2 - Developing Competency Standards 1

Peter Thomson - *CBT: the problems* 19
Percy Worsnop - *Taking the mystique out of CBT* 22
John Nathan - *Nationally consistent practices* 24
Ian Neeson - *A competency-based trade training program* 25
Terry Dwan - *CBT awareness program for employers of apprentice cooks* 29
Bob Mulcahy - *Alternative delivery systems with regard to the National Training Reform Agenda* 30
Mal Chisholm - *Multi-media project* 31

Session 3 - Developing Competency Standards 2

Percy Worsnop - *Role of the Competency Standards Bodies (CSBs)* 33
Clarice Ballenden - *Clerks' Training Model Project* 35
Diana Paton - *Competency-based training in the APS* 36
Cathy Emery - *Social and Community Services Competency Methodology Project* 38
Billie Slater - *Feasibility of expressing generic management skills as competencies* 42

Session 4 - Training programs in CBT

Hugh Guthrie/Doug Gilham - *The provision of training in the delivery and assessment of competency-based training* 45

Session 5 - Assessment and recognition

John Whiteley/John Dungan - *Assessment models appropriate for CBT and their relationship to teaching and learning approaches* 47
Leigh Toop - *Assessment in the workplace: challenges ahead* 52
Janet Scarfe - *Clerks' training model project and associated projects on assessment* 54
Ray Orr/Steve Billett - *Guidelines for assessing affective skills in relation to the workplace* 56
Sally Davis - *Industry assessors project* 59
Shirley Evans - *Social justice implications for the delivery of CBT* 60
Joseph Zonneveldt - *Transition assessment arrangements and developments for the building and construction industry* 63

List of participants 71

CBT Conference
27-29 November 1991
at National Centre for Competency Based Training, Richmond College of TAFE

Introduction

This conference was organised by the TAFE National Centre for Research and Development in liaison with the National Centre for Competency Based Training (NCCBT). The aim of the conference was to provide a forum for key researchers in the competency-based domain to meet, network and exchange ideas.

In order to select the most appropriate conference participants, the project staff at the TAFE National Centre used, as a base, a list of related and relevant research projects working on significant work developing competency-based training and assessment. To this list of invitations was then added representatives of employer organisations and unions, a representative of the National Training Board, members of the VEETAC Working Party, the project Steering Committee and the CBT Secretariat. In addition, a range of other staff from significant projects with CBT overtones was invited to attend.

Papers presented at the conference were of three types. Participants representing organisations made statements of policy, some researchers chose to focus on their own project work and a third group discussed issues arising from their work which challenged current concepts or theories.

Around half of the participants represented projects funded through the National CBT Secretariat and several were from related projects (including two representatives from the Joint Australian Public Service Commission).

The conference program was based on several sessions of talks followed by panel discussions and related workshops. Session topics were:

- *Developing and delivering CBT programs*
  (speakers - Steve McDonald, Peter Hannigan, Brian Conroy and Jane Carnegie);

- *Developing Competency Standards 1*
  (speakers - Peter Thomson, Percy Worsnop, John Nathan, Ian Neeson, Terry Dwan, Bob Mulcahy and Mal Chisholm);

- *Developing Competency Standards 2*
  (speakers - Percy Worsnop, Clarice Ballenden, Margaret Cleland, Kathy Emery and Billie Slater);

- *Training programs in CBT*
  (speakers - Doug Gilham and Hugh Guthrie);

- *Assessment and recognition*
  (speakers - John Dungan/John Whiteley, Leigh Toop, Janet Scarfe, Ray Orr, Sally Davis, Shirley Evans and Joseph Zonneveldt).

Workshop topics included:

- the CBT training program - the output has been both useful and helpful in preparing resources for the project;

- ownership of standards - here the role of marketing the concepts in the implementation of CBT was seen as critical; (see attached)

- resources - this workshop provided an opportunity for several previously isolated groups to make contact and exchange information; eg, the JAPSTC, NSW facilities project, and alternative delivery projects; (see attached)

- a demonstration of software related to the development of learning guides by Mal Chisholm from Queensland Distance Education College;

- higher order and affective skills - this proved to be one of the most challenging workshops of the conference (see attached).

Recommendations that participants wished drawn to the attention of those administering implementation of competency-based training and assessment were formulated. These are summarised in detail in the conference proceedings.

Workshop summaries

WORKSHOP: COSTS OF ALTERNATIVE DELIVERY AND RESOURCE IMPLICATIONS

The workshop noted that the following factors impact on the cost of implementing CBT:

- changed methods of assessment, especially when 1:1;
- anticipation of staffing levels, in particular any non-college based system and self-paced learning;
- delivery mode, eg self-paced learning results in considerable savings as fewer resources are needed at one time and fewer teachers are needed. However, a critical mass of students is needed for this technique to be effective.
  Note: an example of this efficiency was Richmond COT in 1990 when courses were run at 125% efficiency;
- the greater availability of alternative delivery broadens access for people over a wider geographical area and lessens the costs (time away from work, travel etc);
- the cost of ensuring equity of access;
- problems in initially estimating the cost of a module. Are slow learners' extra costs balanced by the savings of the fast learners? Should the slow learner pay more and the fast ones less?
- social costs of the introduction of CBT need to be addressed.

WORKSHOP: GENERIC SKILLS WORKSHOP

The workshop noted that:

- generic skills are, according to the NTB, those common across the range of industries and occupations (eg OH&S, communication). They relate to all people in all circumstances (eg Finn's key competencies and the work of the Mayer committee);
- generic skills are those which can be identified within industry standards and appropriated by similar occupations and modified;
- generic competencies are easy to identify and difficult to assess.

Two questions raised at the workshop, but not resolved were:

Where do generic skills sit vis a vis competency standards? Within industry standards and appropriated by similar occupations and suitably modified?

Where should generic skills be placed in a course - at the front, at the end or integrated throughout?

WORKSHOP: NATIONAL CONSISTENCY

Differences and inconsistencies currently exist in:

- curricula;
- learning resources;
- nomenclature;
- training levels;
- awards;
- assessment;
- training awards/levels.

These have arisen not just because of the existence of state boundaries, but because of the vested interest in various groups in maintaining those differences.

The workshop agreed that it is critical to move towards a national commitment to consistency. The workshop was unable to decide whether the consistency should be in end points, or for the pathways as well.

The workshop agreed that the move to consistency should take a reconstructive approach, providing as it does the opportunity to inculcate into the culture of an industry improvements such as the adoption of standards, skills development etc.

WORKSHOP: MARKETING AND OWNERSHIP OF COMPETENCY STANDARDS

Marketing

- In marketing an essential step is to identify the customers (and their needs). The customers in this case are:
  - professional trainers;
  - on-the-job trainers;
  - off-the-job trainers;
  - sponsors/employers;
  - education institutions;
  - employees/students;
  - peers/colleagues (??).

Ownership of Competency Standards

- it is important that all involved in the implementation of Competency Standards ensure a sense of ownership on the part of the customer;
- TAFE teachers are not yet contributing to the development of Competency Standards;
- it is necessary to identify a means of successfully marketing competency standards, with the assistance of industry representatives, if a sense of ownership is to be achieved;

Implementation

The process of implementation should be according to the following framework:

1. Develop competency standards
2. Implement with a representative group
3. Spread them through the community
4. Adapt the standards as needed
5. Disseminate the revised standards

Implementation issues considered critical are:

- development of a strategy for change/intervention;
- identification of people who will be affected;
- preparation of change agents;
- the need to take advantage of all opportunities for research;
- involvement of champions/sponsors;
- the participation of those directly affected by the implementation of CBT is critical;
- availability of adequate resources to enable implementation;
- recognition of the importance of the timing of intervention is critical;

Other points noted by the workshop were:

- training reform is linked to industrial reform in response to the crisis in Australia;
- there is a need to educate the public. One way is through information sessions;
- there is a need to not only inform but also to listen and react;
- it is necessary that the implementation process be monitored throughout, and after, implementation.

WORKSHOP: OWNERSHIP OF COMPETENCY STANDARDS

Resolutions

There is a danger in limiting the number of CSBs because this could limit ownership of standards. The CSBs therefore need to be encouraged to consult as widely as possible.

NTB has an important role in evaluating and monitoring the CSBs to ensure this consultation occurs.

It is also essential that unions and employer organisations consult effectively with all levels of their membership. There is an important relationship between ownership and marketing. mall enterprises will only be interested in 'owning' if they become convinced of the benefits.

Relationships between education, government and industry are less than smooth where competency standards are involved.

WORKSHOP: HIGHER ORDER SKILLS

Resolutions

The workshop noted the following issues, which it felt should be brought to the attention of the NTB. These issues are:

- that there is a need for more direction for, exploration of and research on higher order cognitive and affective competencies (*NB: this has resource implication for NTB, CSBs, ITABs). This needs to be drawn to the attention of (and marketed to) the Competency Standards Bodies;
- there is a need for greater clarity of and consensus on terminology;
- the workshop expressed great concern about the dangers inherent in too rapid development of the CBT system;
- the NTB should give serious consideration to changing the nomenclature from CBT to CBL - Competency Based Learning;
- when developing competency standards the interaction between environmental and cultural factors must not be ignored.

Session 1
Developing and delivering CBT programs

DEVELOPING AND DELIVERING CBT PROGRAMS - OPENING SPEECH

Steve McDonald - CBT National Secretariat

To date, Australia has lacked a coherent vocational education and training system. The elements are there for such a system; the move to competency-based training (CBT) requires that these elements now be organised to produce high-quality training outcomes. Clearly, much has occurred in recent times to move in that direction. Equally clearly, there is still much that needs to be achieved. Some issues are more developed than others. In some, the hard work of practical application has begun; in others there are still philosophical questions to be addressed. Fortunately, the current atmosphere of consensus makes further work possible.

Aspects of the vocational education and training system, in particular, the rigid prescription of qualifications based on time served rather than on competence achieved, have been identified over the last decade as contributing factors to skill deficiencies in the Australian workforce. The criterion of time served does not guarantee the development of appropriate skill levels and competency. This identification, and remedial actions, have developed gradually.

The development of and progress towards a CBT system is not an overnight sensation. Its evolution goes back some years.

In 1982, a Commonwealth/State Training Advisory Committee (COSTAC) working party on apprentice training and testing recommended all state/territory training authorities examine procedures to ensure that full trade certification was based on more than the effluxion of time.

In 1984, the Kirby Committee of Inquiry into Labour Market Programs (Recommendation 33) drew attention to the need for greater competency orientation in the apprenticeship system.

In 1985, in response to the Kirby Inquiry, the Australian Traineeship System (ATS) was introduced to provide structured entry-level training, based on competency, in areas not covered by apprenticeships.

In 1986, the Commonwealth/State Working Group on Skills Shortages and Skills Formation emphasised that trade training should be towards agreed standards. It also recommended commonwealth financial assistance for trade training to encourage changes in that direction.

Also in 1986, the Western Australian Department of Employment and Training announced the New Apprentice Training and Assessment Scheme (NATAS), a program to incorporate competency-based principles in the Western Australian apprenticeship system with full implementation in 1988.

The development in Western Australia of NATAS provides a working example of a CBT system. Under this scheme, tripartite Trade Description Groups developed training schedules for 93 active trades in Western Australia. These schedules then formed the basis of trade training under the apprenticeship system. It is not suggested that NATAS provides a prescriptive model for general implementation at this stage, but evaluation of NATAS will contribute to the implementation of a CBT system.

In 1987, *serious inadequacies* in Australia's education and training arrangements were noted by the National Labour Consultative Council report *Labour market flexibility in the Australian setting*. Among these were *deficiencies in current apprenticeship training arrangements* and *unduly rigid time prescriptions*.

Also in 1987, the Department of Labour Advisory Committee (DOLAC) Working Party was established to investigate and report on the development and implementation of a competency-based trade training system.

In addition, the Nicholas Clark and Associate Discussion Paper on the *Costs/benefits of standard based trade training*, commissioned by the National Training Council, was released in November 1987 and noted *There are both good educational arguments for pursuing standards-based trade training as well as sound economic arguments.*

In the 1987/88 commonwealth budget, the restructuring of the payments system for the Commonwealth Rebate for Apprentice Full-time Training (CRAFT) program was announced, providing a mechanism through which government financial support was linked to the attainment of specified standards of competency. Related to this was action initiated through commonwealth/state consultative mechanisms to develop a policy for moving the apprenticeship system from time served to a competency basis.

In 1988, a DOLAC meeting considered a report from the working party and agreed that it should be published as a discussion paper. This was widely distributed throughout commonwealth and state/territory networks seeking comments from training and educational authorities, industrial parties and other interested parties. COSTAC was nominated to co-ordinate these responses and report back to DOLAC.

In addition, the Structural Efficiency Principle was introduced for second tier arrangements under the National Wage Case in 1988. Broadbanding of occupational classifications, multi-skilling and more flexible working arrangements led to greater emphasis on skill acquisition and recognition. The process of award restructuring had begun.

Also in 1988, COSTAC considered the DOLAC report along with comments arising from the consultative process and decided such processes were to continue.

A special ministers' conference on training in April 1989 was a significant step in this process of consensus. Taking up a discussion paper prepared by DOLAC, the conference committed all states and territories to work towards a CBT system, expanded to include non-trade areas. COSTAC was given the job of overseeing the implementation of a CBT system and, while specific timelines have not been drawn, substantial implementation by 1993 is the aim.

A COSTAC working party was formed to undertake this work. By this stage, consensus was emerging between the industrial parties on the issue. Work began on the development of a set of principles. These principles formed the subject of the first round of consultations with the industrial parties in 1989. As a result of these consultations, sufficient general agreement was reached to enable further work to be undertaken. A second round of consultations in March 1990 with industrial parties advanced the level of agreement.

In 1990, the National Training Board (NTB) was established. The NTB is an incorporated tripartite body which has responsibility for, interalia, development of consistent, uniform competency standards.

In November 1990, COSTAC released the document *A strategic framework for the implementation of a competency-based training system.*

Also in 1990, the Vocational Education, Employment and Training Advisory Committee (VEETAC) was established, replacing COSTAC and the Australian Conference of TAFE Directors (ACTD) giving vocational education and training its own identity, separate from the labour agenda and a direct access to ministers via the Ministers of Vocational Education, Employment and Training (MOVEET) forum. VEETAC immediately established a series of

working parties including a CBT working party. The terms of reference for this working party were:

- the production of an options paper as requested by ministers for the implementation of CBT;
- assist in the pilot testing of CBT initiatives by acting as the steering group for the SA based CBT Secretariat and the advisory group on commonwealth funded CBT innovative projects; and
- advise VEETAC on initiatives and policies needed to implement CBT in accordance with the direction and timetable agreed by ministers.

In September 1991, the VEETAC working party on CBT released the document *VEETAC working party on the implementation of competency-based training operational plan* which focused on specific issues.

Also in 1991, the VEETAC working party on CBT established nine working groups to investigate the issues of:

1. assessment/certification
2. marketing/communications;
3. delivery;
4. administration, infrastructure, costs;
5. recognition;
6. curriculum;
7. standards;
8. statistics/management information;
9. entry level training.

The purpose of establishing these working groups is to produce a set of national directions and guidelines with supporting documents for use by the vocational education and training community.

Although progress is evident, it has been constrained, for reasons that are themselves quite valid and reflect the diversity of the industrial environment, particularly in the area of award restructuring, and the necessity to adopt a consensus approach to CBT implementation. No attempt has been made, nor will it be, to provide a prescriptive implementation plan. It is expected that the degree of fragmentation will begin to diminish as full implementation approaches in line with the development of award restructuring.

A general consensus has emerged that a CBT system would provide the most desirable framework for reform of the training system, given its emphasis on training outcomes related to industry and economic needs. Such a system requires that training have defined standards of competence and be undertaken and certified against these standards.

With the establishment of the NTB, the emergence of the Australian Committee for Training Curriculum (ACTRAC), the acceptance of the report of the VEETAC working party on the recognition of training and the release of the implementation strategy and operational plan, the advancement of the training reform agenda is gathering momentum.

However, for the impetus for this to continue requires the production of materials and processes. This is uppermost in the minds of the responsible policy advisory bodies.

What must be remembered is that the emergence of a CBT system brings with it responsibilities for the industrial parties in the areas of the operation, maintenance and ownership of such a system. Therefore, processes etc must be acceptable to the clients for which they are produced.

COMPETENCY STANDARDS AND THE CBT SYSTEM

Peter Hannigan - National Training Board

Today I am taking a break from our standard earbashing about how competency standards fits into a CBT system. If you want some answers on that you will have to ask questions later.

Instead I am putting forward some current issues in the development of competency standards for us all to consider. Some responses would be very useful!

The areas covered are the 'holistic' approach to competency and what is needed to assess it, and quite separately the relationship of industry and 'professional' competency standards.

The approach the NTB has adopted is that:

> *national standards define the competencies required for effective performance in employment*
>
> *It focuses on what is expected of an employee in the workplace, and embodies the ability to transfer and apply skills and knowledge to new situations and environments.*

This is a broad approach to competency, looking at it holisticly in a way that will increase the emphasis on the integration of on- and off-the-job training and experience in achieving competency.

The key works here are *workplace* - which is where the outcomes have to occur and which provides the context for the competencies, and *transferability* - which is a key outcome if portability of competencies through credentials is to occur. Articulation and credit transfer also link in.

The NTB has four dimensions in its view of competencies:

- task skills;
- managing different tasks within a job;
- responding to contingencies, such as breakdowns, which involves things like problem solving; and
- dealing with the work environment, involving things like teamwork, quality systems, training and supervision.

It would be fair to say that so far we haven't really fully lived up to that definition.

Industry is having some difficulty in developing competency standards that contain more than task skills, meaning that other aspects of competency such as communication skills and problem solving are being missed also. These competencies are often assumed rather than identified and expressed. They also tend to be future oriented, being the kind of skills emphasised by new forms of work organisation but less involved in traditional approaches.

An example of this problem is a major manufacturing company with a very innovative work organisation system. It had developed enterprise standards and asked the NTB to comment on them. What was pointed out was that the task based competencies developed did not reflect the company's new culture or its actual work organisation based on teamwork, autonomy, problem solving and communication. They are now looking at this issue.

Some industries are making serious efforts in this area, such as Textile, Clothing and Footwear in relation to communication competencies. A major problem being encountered is the variation in the skills of the people in the industry, and the varying requirements of employers in the industry.

Many people seem to be reaching the conclusion that we will have a CBT system with very limited outcomes unless competencies can be identified and described adequately.

This has important implications for industry, as it will make processes to identify competencies through methods such as skills analysis that much harder, at least initially. At the same time, it is a way of ensuring industry gets the full benefits of the outcomes of CBT.

The question I would draw from this is: *Are the methods of analysis available appropriate for this task?*

Ideally the NTB would like to maximise the use of nationally consistent expression of the more generic aspects of these competencies across industry. This would make the life of providers easier and provide benefits of transferability to people.

This may be achieved through the Key Competencies exercise resulting from the Finn Review of Post-compulsory Education and Training, but this is not clear yet.

Once we have holistic competencies, people have to train for them. How delivery is undertaken will stretch some areas of the education and training system. However, I want to look at the next step, assessment against the competency standards.

Assessment of holistic competencies raises interesting questions about the level at which assessment occurs. A checklist approach of ticking off each performance criteria of each element of competency would hardly seem appropriate. Assessment at Unit of Competency level, or even groups of units may be possible.

All sorts of questions of validity and reliability would arise.

Even with fairly task oriented competency standards problems in assessment are arising. The issue would seem to be that in many circumstances the performance criteria and the range of variables do not provide enough information to make valid and reliable assessments. While they indicate the outcomes expected in performance, they don't explicitly say what would be regarded as evidence of achieving those outcomes.

This leads to my next question: *Should the NTB introduce an evidence category into its standards format?*

This could operate along the lines of the evidence box in the British system. Evidence in the NCVQ format is broken into evidence from performance, supplementary aspects and from RPL.

There is a further issue then of how specific the content should be. The issue of holistic assessment arises again when you consider whether evidence should relate to unit, element or performance criteria.

My last area is the professions. I wish I knew what one was. I'm sure it's not just a university education. What is clear is that there is a potential divide between competency standards developed at the industry level containing career paths, and competency standards in the professions which are essentially occupational and generally have little articulation with lower levels of paraprofessionals and technicians that work with them.

There is a particular issue here of the role of regulatory authorities which can dominate development and competency standards, and also assist in entrenching historic demarcations.

Professionals tend to be spread across a range of industries, or at least service a range of industries, and it seems logical that there are some specific competencies involved in dealing with particular industries that could be identified.

It has to be said that groups like the engineers are addressing these issues and paying attention to the technical levels, partly due to the pressures of award restructuring and the Metals career path.

This leads to my last question: *How should/can competencies reflecting industry based career paths be linked to broad professional competencies?*

One of the things that has become very clear to me is that all the elements of the CBT system influence each other, and you cannot make decisions about one element in isolation from the others. This applies to competency standards as much as to curriculum or assessment.

This conference provides an opportunity to consider the linkages between the elements so we can strengthen the overall CBT system.

I look forward to our discussions on all the issues arising in these three days, and trust we will achieve some outcomes.

CBT - WILL EMPLOYERS PARTICIPATE?

Brian Conroy - Victorian Employers' Chamber of Commerce and Industry

I believe the question I pose in the title of my speech: *Will employers participate* is crucial to the success of CBT. I don't propose to answer it directly, but rather to look at the evolution of CBT and make some suggestions that should maximise employer participation.

At the outset I would like to make it clear that VECCI supports the training reform agenda and the move towards competency-based training. There can be little argument that the traditional time-based system of training has had its time. If the Australian workforce, indeed the community at large, is to become smarter and more productive, we need to change our approach to training.

VECCI believes that CBT is logical and efficient and agrees that it should be the cornerstone of change to our training system. However, that support is not un-conditional. It relies on training reform being driven by a desire to deliver high quality industry and enterprise relevant training. It relies also on the reform being sufficiently flexible for implementation at the enterprise level.

The development of CBT-Employer involvement

I put it to you that, in much of the recent debate on CBT, we have lost sight of our customers and their needs, particularly those of employers. We now seem to be in a frenetic race:

- a race dictated by the political agenda;
- a race that seems to be designed to meet a timeframe that was not determined by industry; and
- a race that appears to view industry as a homogeneous group.

In our rhetoric, we say the CBT changes are *industry driven*. And we have ITBs, ITABs, the NTB and other tri-partite bodies to prove it. We also have a whole range of groups, most of which have some industry representation looking at the elements of CBT. And of course, we have the tri-partite VEETAC Working Party whose role is to plan and co-ordinate the CBT project.

But I ask, who is looking at what employers want? Similarly, who is looking at the diverse needs of enterprises - because this is the level at which CBT must work? And, finally, who is looking at the capacity of enterprises to implement the vast array of changes inherent in CBT?

Likewise, in all the CBT projects that are now underway, who is testing the outcomes in terms of:

- necessity;
- flexibility;
- contribution to quality training?

As far as I can see there seems to have been little regard paid to how the system will be implemented at the enterprise level. I suggest that unless this and the other deficiencies to which I have referred are addressed, the continuing support of employers cannot be assured.

Indeed, it is not just a question of support. More importantly, it's about employers'

understanding of the system which they will be expected to implement. I do not believe that even the fundamentals of CBT - including the Australian Standards Framework - are adequately understood or endorsed at the enterprise level.

It is my view that at this level - where the success or failure of CBT will be determined - individual employers can't be expected to participate in or support a system they don't fully understand. I will go even further. Unless we decide now to move on this issue immediately, CBT will be in jeopardy. And there is a grave risk that - come 1993 - individual enterprises will choose not to participate.

This need not be the case. There are strategies that can be implemented to maximise employer participation.

Suggested strategies

There are four strategies/approaches that I would like to suggest.

1. **Education**

   As I said before, the level of understanding of CBT at the enterprise level is very low. Most of the discussion/debate to date has been among members of *The Training Club* and with selected large employers.

   This cannot continue. We need to bring all enterprises into the game. We need to develop a comprehensive education/information strategy targeted at the enterprise level. The strategy must be realistic and explain how employers will be expected to contribute. It must also deal with their fears and concerns. Above all, the strategy must aim to convince employers that CBT is relevant to their needs.

2. **Flexibility**

   When I talk about flexibility, I mean a system that recognises that Australian industry has enormous diversity. The structures and processes of CBT must recognise this. Similarly, they must acknowledge the vital part that small business will play. Unless these variables are recognised and reflected in a flexible, adaptable CBT system, small business will shy away from it. Likewise, unless the pace of change is manageable, enterprises will not embrace it.

3. **Phasing**

   Business is not like the public training system. Business therefore cannot be dictated to and regulated like the TAFE sector. I know there are some who will disagree with that view but I would argue that CBT will not succeed by compulsion. Nor will it succeed unless its implementation is *phased in* in accordance with industry's ability to manage. A sensible approach would be a series of planned incremental changes over a reasonable period (say 3-5 years).

4. **Cost**

   Finally, there is the issue of cost. Employers are coming round to the idea that the money they spend on training is an investment not a cost. Certainly, that is the

message that the VECCI conveys to its members. That however, does not mean employers take no account of the cost of training. Cost is always a factor for business, but never more so than in a period of recession. That is a reality that must be faced.

Conclusion

CBT is a sound logical and efficient concept. As such, it has the support of the VECCI and we will do all we can to sell it to our members and employers generally. But, if CBT is to succeed, it must be a product that:

- the customers want and perceive as meeting their needs;
- is understood and supported by employers at the enterprise level;
- is phased in at a manageable pace;
- is flexible and can be adapted to the diverse needs of enterprises; and
- has benefits which outweigh the costs.

In my view these, together with the education of enterprise level employers, are essential ingredients to the successful implementation of CBT.

A BRIEF OVERVIEW OF THE ACTU POLICY ON CBT

Jane Carnegie - Australian Council of Trade Unions
A response to Brian Conroy

Education

At the enterprise level there is a very little understanding of the education and training reform agenda. This is not through a lack of money (one might even say that the only industry booming in a recession is that of training).

There is much work done at the policy level - critical work, but very little of it has sifted through to the employer/enterprise level and to the workers.

A recent TUTA survey of what is understood about CBT and what it involved showed an almost overwhelming lack of understanding on the part of unions.

There is a need to examine the implementation process at all levels - policy, industry and workers. Also needed is a national underpinning framework which clearly outlines the goals and achievements so that when CBT is taken into enterprises we are very clear what it is we are there to achieve.

There is still an unease about how the reform is going to work and we need to continue on with the search for coherent national policy issues. The pace of change should not be slowed, but we do have to give time for consideration of these issues.

Flexibility

There is a need for flexibility in the implementation process but not at the cost of consistency. The role of small business is crucial, and to date the emphasis has been on big business. There is currently an overemphasis on the major players. It is important that it all be made to work on the ground. If it doesn't work there, we are going to have the same situation as when only certain sections of industry are involved and others are disregarded, especially women.

It is important that we do not mirror the UK model with its myriad of standards.

Phasing

The pace of change must be manageable, but within that all the industry parties must take responsibility for implementation. In some industries the reform is running ahead and there is a danger of these practices becoming the practices of others by default.

Costing

The general principle of *benefits outweighing costs* which is so regularly referred to reflects a view of training as a cost, not an investment. Employees bearing the cost is not tenable from a union point of view as an investment in training is not a cost to the employer - there are future returns.

Implementation

Key issues here relate to standards, the NTB framework and standards driven reform.

Definitions and Development

Standards of competency must be defined in a holistic way but this is more difficult. It is easier to develop task based or narrow standards than take a holistic approach and the process will determine a narrow pathway if a skills audit approach is taken. The NTB receives narrow standards because of the way they are developed. It is important for all parties to be aware of this issue - educational authorities, consultants, employers, unions.

Definition of industry, occupation and enterprise is crucial. If there are narrow limits set then there will be a plethora of standards. Therefore it is important not to have too many CSBs.

The definition of competency reflects the dichotomy between training and education. We should be talking about Competency Based Education, not CBT.

Consultation

The level of consultation during the development of standards is important. Currently, by the time a set of standards gets to the NTB it is endorsed even if it is narrow, task based or Tayloristic.

Alignment

Standards must align with key award levels. The training and education system should mirror what is happening in industry (eg skills based pay). The unions believe that this nexus is crucial but not all employers agree.

The Australian Standards Framework needs remodelling, and a link established between classifications and standards. There needs to be further work and then consensus on the NTB's eight levels.

Gender bias

Standards must be gender free. A task analysis approach to the development of standards carries with it the danger of gender bias.

Professions

Unions see a coherent flow from schooling through vocational training and professional qualifications. If training is to be on a standards based system then there must be one body to set the standards. There is a need to heal the relationship between the NTB and NOOSR.

The crucial issue in the Training Reform Agenda is to broaden access to and increase equity in education and training. Otherwise the reform will not lead to a radical restructuring of the system.

Session 2
Developing Competency Standards 1

COMPETENCY-BASED TRAINING: THE PROBLEMS

Peter Thomson - TAFE National Centre for Research and Development

I have three points to make:

Competency-based training is too much driven by forces from the dark side.

Stripped of all the rhetoric, the move to competency-based training can be seen as a way of producing more highly skilled individuals than the country presently has. An element, I guess, of the Prime Minister's clever country concept.

I believe a lot of us involved in research and development work associated with competency-based training would like to see it in that way, but unfortunately we can't. We have our work diverted by concerns associated with outside forces - those on the dark side.

Foremost among these is the industrial relations lobby which seems intent on hijacking competency-based training to suit its own ends.

Not that I think industrial relations is unimportant to competency-based training. Indeed, I believe it is of fundamental importance. And I am sure that the new training system will not work if all parties do not have a sense of ownership of the final product.

But ownership comes from working together so I despair when I'm told the other day that the term 'maintenance' belongs to a particular group in our community and nobody is to develop competencies associated with maintenance skills other than that group - so much for joint ownership!

Politics provides another force from the dark side. The current debate between the commonwealth and states about TAFE funding is a good example. I'm sure our competency-based training system can be modified to accommodate whatever arrangement finally emerges in this area.

But waiting for this to happen is wasteful of time and resources - and extremely frustrating for those trying to get things done.

And the third outside force causing us problems is the United Kingdom and the superficial similarity between the UK's National Vocational Qualifications and our National Training Board's Competency Standards.

Too many of us, and by us I mean research and development workers in the competency-based area, are allowing themselves to be unduly influenced by the UK experience.

Not only would I claim that we seem to be repeating overseas mistakes rather than learning from them; but also we have not appreciated the fundamental difference between the UK and Australian systems.

The fact that we do not have national examination and accreditation bodies like City and Guilds, the Royal Society of Arts and BTEC seems to have escaped many people over here.

And in Australia we are about to lock industry occupational classifications in with competency levels of the National Training Board's framework. This is not being attempted in the UK or anywhere else to my knowledge, and it makes our system very different from theirs.

It means we have a much more difficult task and it also explains the great interest from the industrial relations people.

What we are trying to do has been described to me (by an old TAFE hand) as a stunt that even Evel Kenevil would not have attempted in his hey day.

CBT underestimates the complexity of skill transfer.

Try this analogy. Chess is like war, therefore good chess players should make good generals and vice versa.

It seems commonsense, and it's an idea that has enabled Edward de Bono to become a very rich man.

But there is more than a little evidence to suggest that it has a serious flaw. There is evidence, for example, that experts use a rich knowledge base when solving problems and the knowledge base of a general is very different from that of an expert chess player. The problem solving skills in chess do not, therefore, transfer to war because of the different knowledge requirements.

Yet when we read one of our current bibles on competency-based training - the National Training Board's Policy and Guidelines Document - we find statements like:

> *core standards are valued by employers and employees because they facilitate transferability and provide the basis for both broad skilling and up-skilling of the workforce.*
>
> (National Training Board Policy and Guidelines)

If this is meant to imply that skill transfer is facilitated, I'm unaware of any evidence which supports this.

Yet it is an extremely important point and identifies an area that is urgently in need of further research - it might be true; but we don't know.

I worry that we have such a poor research base for many of the assumptions being made about competency-based training.

Competency-based training frightens people when assessment is also mentioned.

We are accumulating problems related to assessment of competency-based training and these problems are not going to go away - no matter how much some people continue to pretend they don't exist.

The decision to recognise a performance as satisfactory and infer competence is the basis for the success of a competency-based program. If these decisions are wrong, the system will almost certainly collapse.

We are developing a system which, in the final analysis, rests on the quality of the performance criteria that accompany the elements of competency. But these performance criteria are not much related to training, they are basically guides to assessors.

So I have to ask - who are these assessors? Where are they? What training do they need?

I find it almost incomprehensible that the system has been allowed to develop as far as it has with so little guidance in this area.

Let me give you a taste of some assessment questions.

If somebody can perform satisfactorily in a work situation do we need any further evidence of their competence? And, irrespective of whether assessment is to be done in the workplace, away from it, or some combination of both, do we gain our evidence by assessing products or processes or the knowledge which underpins these? Do we want to assess all three? And how much evidence is needed? For example, if we choose to assess by observing somebody do something, then how many observations must be made to infer competency?

What about attitudes? Can they be assessed validly and reliably? Should they be assessed at all?

I could go on, but I simply want to make the point that we need to find answers to these questions. And we can find the answers if those driving the system will provide us with the resources.

The answers won't be perfect, (assessment doesn't lend itself to perfect answers) but they will be better than what we have right now - which is very little indeed.

* * * * *

I wanted to start this session off by emphasising how imperfect our understanding of competency-based training is; and stressing the enormous amount of work that remains to be done in order to get things right.

Competency-based training is hard!

TAKING THE MYSTIQUE OUT OF CBT

Dr Percy Worsnop - Confederation of Australian Industry

This address is, in part at least, an appeal to those involved in developing policies and implementation strategies for competency-based training to keep it simple.

There is rapidly developing an industry around the concepts associated with CBT. Newly-emerging experts are writing papers on various elements of competency-based training. A recent review, not by any means exhaustive, turned up 30 papers on assessment alone. And for curriculum developers, the whole movement towards CBT is *Paradise Regained.*

I am not complaining because people are going into print on various aspects of CBT. Nor do I wish in any way to denigrate the efforts of those who seek to respond to the challenges the change in the approach to training that CBT represents. I am concerned that, if it does become an industry, it will be an esoteric study far removed from the purlieu of the madding crowd. In short, I am concerned that it shows worrying signs of becoming incomprehensible to the very people whom it was designed to help - people in industry.

The possibility that the competency-based training system will be buried in jargon, lost in a jungle of bureaucratic arrangements and shrouded in complexity so that it seems just too hard looms as a potential problem for employers and for people in industry generally. We must make sure that does not happen.

If, in fact, we do fail, then industry will turn its back on the whole brave new world of a nationally consistent Australian Vocational Education and Training System. None of us could accept that. Too much work has gone into the preparation for the system, even at this early stage, for us to accept the total condemnation of our work that rejection would involve.

Where do we go from here? I will propose today a simple framework that picks up the key points and which might serve as a model.

A model of CBT

In drawing up a model of CBT, one starts, as with CBT itself, at the end product. The end product of CBT is a competent, should I even dare to say certified, person. The end product is a person who holds a certificate which attests that the person is assessed as competent in certain areas or at a particular level of activity in the workplace.

To obtain that certificate the person will need to have his or her performance reviewed by someone who is able to say that the person is competent in the job. What is this judge of competence actually saying? The assessor, the judge of competence, is saying that, on the basis of the evidence, be it through observation, testing or whatever, the trainee appears to reach the level of competence required for the certificate.

The reality of assessment is that it is a process through which a qualified assessor samples someone's behaviour or performance. On the basis of that sampling, the assessor is able to say that: *I am confident that this person is competent to perform to a satisfactory standard at a particular level in the workplace. Further, I am confident that this person will perform competently in a variety of circumstances.*

And that is all we should expect an assessor to do. The whole process becomes inordinately complex, and unnecessarily so, if we start to introduce testing across a wide range of

separate skills, following a Taylorist model, in an infinite range of circumstances. That is not necessary. It is not practical. It is not appropriate.

The assessor, at the same time, does need to follow a predetermined approach to measuring performance. Consistent assessment of competency depends on two things:

1. a consistent measuring procedure; and
2. a consistent standard of measurement.

It is important for the confidence that employers and employees should have in the whole CBT process that assessment is an ordered affair.

Continuing from the end product back to the source leads finally to competency standards. Training, measurement, assessment and certification all need to be based on standards of competency. The competent person in an industry or occupation is, by definition, the person who performs to the standards required by industry.

To sum up, competency-based training follows a direct line which flows through a set of key points:

1. establish standards of competency;
2. identify appropriate measures of competency;
3. sample performance to assess competency;
4. provide certification to the person.

All the other elements spring from these key points. Let's resolve to keep this simple framework in mind and not cloud it with words which give it a complex air.

NATIONALLY CONSISTENT PRACTICES

John Nathan - State Training Board, Victoria

As a starting point for discussions we have to recognise that we have a Federal system with three levels of government and state boundaries. These will remain for at least 10 - 15 years and therefore there will be territorial arguments. This charges workers in this area with the incredible responsibility of ensuring national consistency in their work. It was at that point that the project I have responsibility for was born. I am a member of the CBT Working Party and have a pilot project on nationally consistent administration. Given an insight into the responsibilities at state level for training and how I think a nationally consistent system could evolve I now recognise that the basic premise I started from proved to be wrong and I will now share that with you.

It is important that we now stop talking and start doing. We will not get past the veneer (or the CBT Club) until we start doing. And if we start 'doing' in the new climate of quasi jingoism there is a chance of success. How do we do it though? Apprenticeships are something that are well understood. Therefore, I assumed we could use this as a framework on which to hang CBT and then expand to the broader trade field. I thought this would lead to a series of policies which could be adopted as 'memorandums of understanding' by all states and these would then build a nationally consistent system. Each agreement would be fundamentally the same with only regional variations.

This was the dream. I thought I knew the answer, but I was wrong. The fundamental flaw was the assumption that everything would happen at the same speed, and that what suits one industry would suit another, what is suitable for one site is suitable for another ... . It does not work that way. It is clear that there are different speeds for different industries and regions.

At the end of the day we must have a system which recognises that a training exercise taking place in North Queensland has to be equivalent to one in La Trobe Valley. People need qualifications which are recognised in all parts of the country as mobility is one of the fundamental features of the Australian workforce. We must all use the same criteria/outcomes.

There are very powerful forces that need to be taken into account in the state and federal industrial relations systems and these are not universal. The Eastern states, by nature of the population size, have greater influence from the Federal Industrial Relations Commission, while Western Australia is dominated by the state system. It will be impossible to use a universal nomenclature. Occupations as described in Federal awards will not line up with credentials in terms of terminology.

In my view these are some the artificial barriers that might bring the system down.

But it is time we stopped talking about CBT and started 'doing'. Small employers won't understand what we are talking about. We need to market the system and raise the level of debate, and then we will be able to move a long way toward a nationally consistent administration. States will recognise each others qualifications, RPL etc. It can be done, albeit not easily. We cannot ignore the dark forces, but we must work within them. It is nonsensical to ignore the IRC and political agendas, and the messages from Europe and UK.

I urge those of you with your own projects and those of you influential in your own forums to get on and do it. There are many pilot projects, but no significant/substantial?? activity yet. The political agendas are out of our hands and thus there is an urgent need to get on. Time is running out, given the magnitude of the task.

A COMPETENCY-BASED TRADE TRAINING PROGRAM

Ian Neeson, TAFECOM NSW

Background

A large manufacturing company amalgamated the duties of Electrical Fitters and Instrument and Control tradespersons employed at one of the company's major sites resulting in a single trade classification under a site industrial agreement. This came about as part of restructuring plans jointly devised by company management and local unions. The amalgamation required each tradesperson to be trained into the second trade through a two year indentured program.

It became obvious that a dual trade training program would be needed for future trainees (apprentices) joining the company in these trade areas. TAFECOM consultants were engaged to work with company management and site union officials to develop a training proposal for future trainees. Initially some training strategies were put in place to address the dual training needs of apprentices then being employed and those already in training. Data from these initial strategies has been used in developing the final program.

The final proposal for the dual trade training program was approved, subject to full development of training standards and competency assessment procedures, by the Industrial and Commercial Training Council of NSW in December 1990. The program, known as *An alternative training program for the declared trades of Electrical Fitting and Instrument and Control,* is competency-based with a nominal training period of five years.

Training program specifications

The training program has to integrate with the company's corporate aims and management philosophies and address government's policies for both present and the future directions in vocational training. Under these broad criteria specific requirements have been formulated so that the training program should incorporate:

1. Competencies defined in terms of vocational performance requirements;
2. On- and off-the-job training standards linked to the defined vocational competencies;
3. Training standards that recognise common skills and skill concatenation across the vocational competencies;
4. Training standards that maximise the opportunities for competency acquisition and competency maintenance;
5. Vocational competence determined by indicators and key knowledge and skills determined by assessment;
6. A training management plan that incorporates both competency assurance and training improvement components.

Program development

The development work is focused on four areas:

- formulation of vocational competencies;
- composition of training standard;
- determination of competency;
- development of a training management plan.

Formulation of vocational competencies

The vocational competencies have been developed using data from two surveys of the skills applied by each trade in their work on the company site. The surveys were conducted when the amalgamation of the two trades was being established. 81 units of competency, incorporating some 140 elements, have been identified and are written along National Training Board guidelines.

Composition of training standard

The development team has recognised that a vocational competency embodies competencies in a variety of key skills (and knowledge). Vocational competence is the satisfactory outcome of a concatenation of the key knowledge and skills applied to an area of work under the agreed domain of a given vocation. The key skills also have a degree of commonality across the vocational competencies. It is on these premises that the training standards are being developed.

Before the training standards could be fully developed it was necessary to obtain a larger data base of key skills practised under each element of competency and the common use of the skills across the competencies. This information was gathered from a survey of 20 electrical and instrument tradespersons from several different industrial activities. The survey involved responses to 235 key skills and knowledge areas under each of 104 of the originally identified competencies. The survey is being extended to a further 20 tradespersons and based on the 140 elements of competency.

The off-the-job training standards are to be developed from the key knowledge and skills identified in each competency element. The key skills and knowledge will then be matched to the competency learning outcomes in the national modules for the electrical and instruments streams.

The on-the-job training will centre on the integrated development of skills distinguished in performance criteria of the competency elements. The identified commonality of skills across competencies will assist in determining alternative performance criteria to satisfy competency in an element.

Determination of competency

Three levels for determining competency are being considered. First, the assessment in key skills and knowledge should reside with the provider of the off-the-job training. The off-the-job training curriculum for electrical and instruments trades is contained within the national (trade) modules which specify competency assessment of defined learning outcomes. Workplace assessment will be needed where corporate training requires competencies in key knowledge and skills at a higher or specialist level than provided for in the national modules program.

Secondly, it is anticipated that competency in integrating skills in normal on-the-job activities will need to be assessed. This assessment would be associated with work undertaken in the normal activities of the workplace.

Finally, the vocational competencies as defined in the performance criteria and range statement should be determined by indicators. At the vocational level the underpinning knowledge and skills, stance and way of thinking work together. Competence in the key knowledge and skills having been previously evaluated need not figure highly in any

appraisal at this level. Given competence in the key skills and knowledge, it appears that the factors which influence the application of the skills in the workplace are the determinants of vocational competence. This supposition has prompted the initiation of a study into factors that may indicate competence at the vocational level. Initial work has commenced on the amount of practice required to attain a vocational competence. Data from the interim training program will also be used. The study will include such factors as types of practical experience, work organisation at an individual level, performance in unique situations and communication.

Development of a training management plan

The ability of a training program to meet outcomes as well as the progress of participants needs to be continually monitored. Where discrepancies in the program or skill deficiencies are found corrective action should be taken while maintaining training continuity. The most appropriate and cost effective methods of program delivery require analysis and implementation. An inventory of the organisation's skill base is a necessary element in accurate planning for development and growth of the organisation. All of these areas are a function of management within a training program and have been considered in the proposed plan for managing this training program.

The management plan is to be developed on Total Quality Management principles to complement the company's management philosophy. The training concept model, Figure 1 shows where the Quality Management components, Quality Assurance Procedures (QAP) and the Quality Improvement (QIP), could be applied.

Management components in the interim training plan such as training responsibilities and procedures, computerised tracking of on-the-job training, advice for trainees and training action plans can be adapted to meet the requirements of the new management plan.

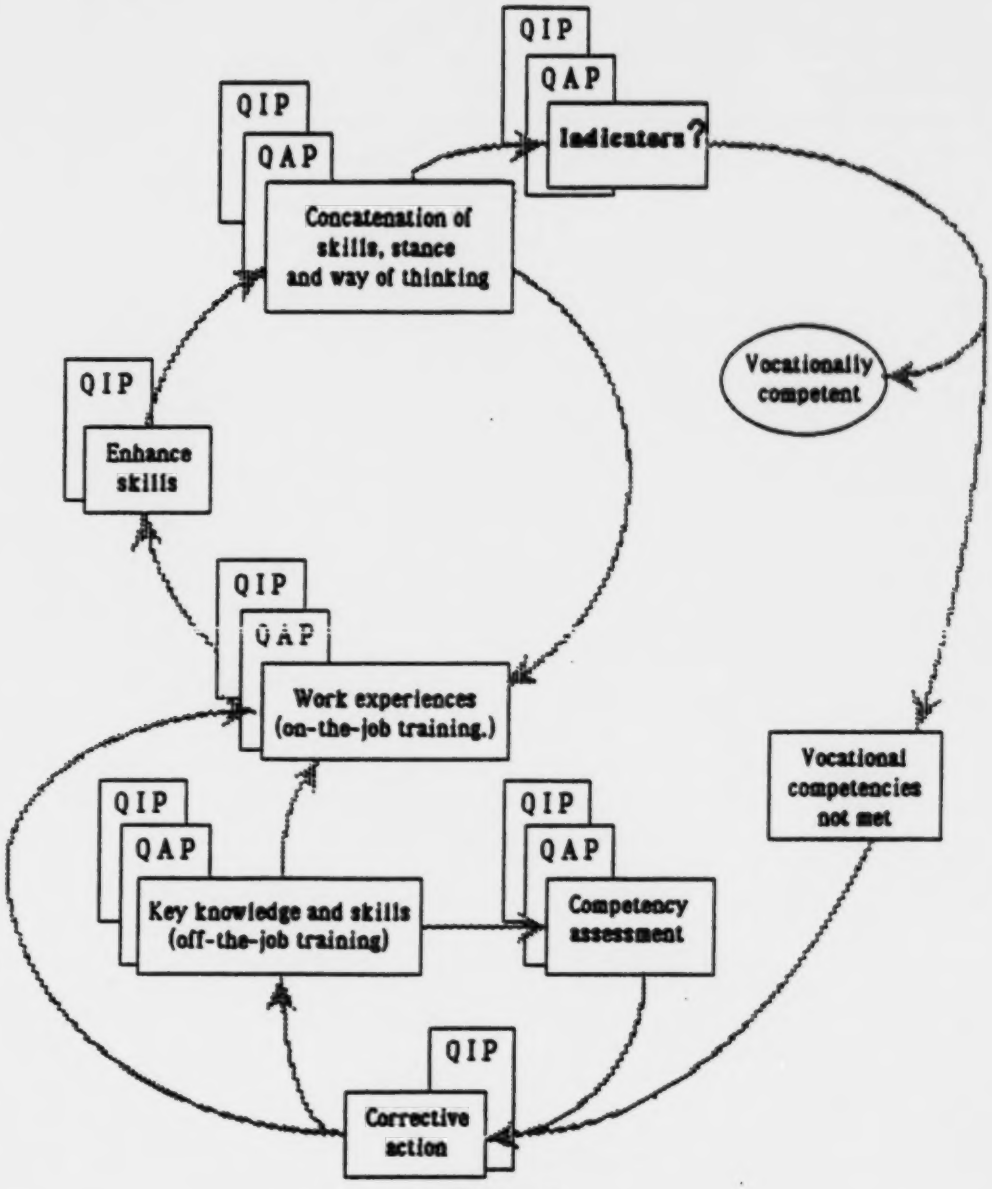

Figure 1

Summary

This report is only a brief account of the concepts behind the development of this program. The work has involved the co-operation of company management, site unions, personnel, government departments and the assistance from other companies whose operations are supported by the skills of electrical and instrument tradespersons. The training program is expected to be in operation in 1993.

TAFECOM consultants:
Ray Seary
Terry Walker
Ian Neeson

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CBT AWARENESS PROGRAM FOR EMPLOYERS OF APPRENTICE COOKS

Terry Dwan - Dwan Consulting Australia Pty Ltd

CBT in cooking has a national curriculum. Last year two TAFE colleges in Queensland piloted the program. This year (1991) all are shifting to a Competency Based model (in theory at least).

The Queensland Tourism and Hospitality Industry Training Council have sponsored the program, with funding coming from the CBT Secretariat. It is targeted at employers/managers, TAFE teachers and other industry related people and aims to increase the communication between industry and TAFE.

Project Format

The project takes the form of 12 two hour sessions on:

- the principles of CBT and the implications for cooking apprentices;
- an understanding of what employers need to do;
- resources and support available;
- identification of the changes to be made in the system to make it work better.

Methodology

Material was gathered through interviews with 10 Executive/Head chefs, 15 administrative and TAFE personnel and 2 apprentices. A meeting was then held with 35 chefs and desk research completed the task. A disappointment has been co-operation with TAFE. For example, one college deemed to be expert in CBT would only be involved in this project research on a fee-for-service basis as it saw the project as competing for the same market in which it was interested in conducting similar programs.

Research Findings

- there is no understanding of CBT in Queensland;
- the training record book for apprentice cooks is excessively complex with 661 competencies, with detailed standards for each competency. This is now under review;
- on-the-job: chefs need to be given help in implementing CBT, in particular they need assistance with
  - designing training;
  - conducting training;
  - assessing competence.

  (The latter is interesting as the appropriate structure is in the record book.)
- off-the-job training problems;
- the TAFE system is like a supertanker. It has a long response time. Teachers have not yet adjusted to the idea of CBT and the alignment between off-the-job and on-the-job training is almost nil;
- there is resistance to a totally modular system for off-the-job and training with no block release periods. For example, if a college in Townsville is drawing apprentices from Mount Isa, then block release is the only way to cope with rosters and a modular system is not practical.

ALTERNATIVE DELIVERY SYSTEMS WITH REGARD TO THE NATIONAL TRAINING REFORM AGENDA

Bob Mulcahy - Department of Employment, Industrial Relations & Training, Hobart

Summary

Problems identified by the project:

- defining what alternative delivery systems are an alternative to;
- the assumption that an alternative delivery system is necessarily high-tech;
- the assumption that alternative delivery refers only to open learning colleges and distance education.

Examples of an entirely industry-based approach:

- *International Catamarans* has TAFE teachers on-site running industry-based training programs; and
- *Australian Newsprint Mills* at Boyer uses TAFE resources and facilities, but provides its own trainers and programs.

Importance of learner-centred approaches

The project found that the introduction of CBT is inextricably linked to alternative delivery systems together with greater emphasis on training practices such as RPL, credit transfer, articulation and self-paced learning.

Identification of those affected by the introduction of CBT

CBT is not exclusively the province of industry. A large proportion of students (perhaps a majority?) in CBT programs are not supported by industry and not directly linked to the workplace and employers. For example, in Business Studies anyone up to the Associate Diploma level is not supported by the workplace or a union. Yet these people must be considered under the National Training Reform Agenda and the industry standards prescribed through the National Training Board.

Project conference findings

The most important single issue arising from the conferences the project held around Australia is that resources are the key component in the process of change. The staff development of all the main players, not just TAFE teachers, must be considered. As well, adequate teaching facilities and resources are mandatory, especially if Alternative Delivery is to truly support CBT programs.

MULTI-MEDIA PROJECT

Malcolm Chisholm - Queensland Distance Education College

The aim of this project is to develop relevant multi-media training resources for curriculum areas that may be difficult to learn. These resources are intended to enhance the effectiveness of the print resources presently being developed for the national metal's curriculum.

It is not the intention of this project to provide a complete coverage of ALL the topics of the nominated modules.

The reason for the multi-media approach is to support other adult learning styles, hence better enabling affective learning. *Affectively, it can be said that learning is successful if the learner enjoys it, and feels a sense of accomplishment.* (Biggs & Telfer 1987)

Curriculum areas

Analogue and digital electronics for national metals curriculum:

- Modules NE04 to NE08, NE15 to NE17 and NE72; and
- Hydraulics and pneumatics modules NM30 to NM33.

The learning resources will be:

- **Modular** - programs will be broken up into multi-media units of learning which will have identified outcomes;
- **Competency-based** - criterion based assessment to ensure competency in clearly defined skills, knowledge and applications;
- **Broad-based** - participants will be given a sound basis in skills which will have national recognition; and
- **Self-paced** - open entry, open exit systems, allowing participants to progress at their own pace.

Input will be sought from projects dealing with the following:

1. National trainer competency standards
2. National assessor competency standards
3. Assessment methodologies eg employment assessment, industry mentor assessment, hands-on assessment, computer assisted assessment, interview panel assessment and questionnaire.

The implications of the following competency-based training issues will be investigated by the project:

- the recognition of prior learning;
- certification;
- articulation;
- accreditation;
- social justice/equity issues; and
- costs.

The Multi-media project will investigate and make recommendations on the application of the assessment outcomes.

This will establish:

- which certification flows from the assessment process;
- which body/ies will be responsible for the issuing of certificates of competence; and
- articulation issues arising from the assessment/certification process.

Other projects and programmes that project members will consult with are the:

- Engineering Production Certificate Development (Victoria);
- Materials Development Project (Queensland);
- Electrical Fitter Mechanic Project (Queensland);
- Stanwell Skills Development Programme (Queensland);
- Metals and Engineering Advanced Certificate/Associate Diploma Project (ACT);
- National Metal and Engineering Certificate Review Group (Victoria);
- National Metals and Engineering Training Board;
- National Electrical/Electronic Industry Training Council; and
- State/Territory training authorities.

Issues that concern this project are being investigated by:

- Broadmeadows College of TAFE regarding its project on the recognition of prior learning and assessment;
- the Sir John Monash Business Centre regarding its project on assessment practices;
- the TAFE National Centre for Research and Development regarding its projects on assessment;
- the State Training Board of Victoria regarding its projects on:
  - social justice implications in competency-based training; and
  - the administrative implications of competency-based training;
- the steering group overseeing the Western Australian New Apprentice Training and Assessment Scheme;
- the National Building and Construction Industry Training Council regarding its project on competency assessment specifications, skills credentialing and recording systems; and
- the Bureau of Employment, Vocational and Further Education and Training, Queensland, regarding its projects on affective skills, trainer training, field officers and self paced delivery.

The project development group is the Open Learning and Training Technologies Centre (OTEC). This is an industry interface unit of the Queensland Distance Education College of TAFETEC. OTEC manager is Mrs Clem West and Multi-media project manager is Malcolm Chisholm. Contact can be made with Malcolm Chisholm on (07) 840 4841 or fax (07) 840 1986 for any further information on this project.

Session 3
Developing Competency Standards 2

ROLE OF THE COMPETENCY STANDARDS BODIES (CSBs)

Dr Percy Worsnop - Confederation of Australian Industry

One of the difficulties facing Competency Standards Bodies (CSBs) is the task of getting the right people. Any industry encompasses dozens of parties who have different views and perceptions.

One of the elements of complexity that we must deal with are those people developing competency standards for their own industry while at the same time claiming workplace training is part of everybody's function within that industry. This is one of the forces at work ready to absorb our time.

The CSB Workplace Trainers that I am on is a mixed group who were given a quick introduction to competency standards and then immediately became the experts in the area. It is interesting that in what is ostensibly a training and educational reform process that without any training or education in the area we became the experts. We had to struggle because we were trying to set standards for an occupation that runs across industry, as distinct from a group which is working with standards for a particular industry (difficult enough).

Another aspect of the task is the considerable time spent debating the whole philosophy associated with the business of establishing competency standards.

I believe that the standard sifting process will eventually produce useful material, but if anyone thinks there will be appropriate material available in a short period of time then they are 'playing games'. It will take years, but we do have to get first cut at the task and then further deliberation to refine it. The magnitude of the task is frightening.

Rules which govern the role of CSBs.

CSBs are part of the framework of the training reform agenda. The approach that we from the 'industrial side' are taking to the task is to get industry actively involved in the process (there is a joint paper ACTU/CAI paper on this). Industry has theoretically been involved in training and development for a long time. But there has been a level of disinterest, even 'moribundancy,' about the participation of industry - it is swampy ground at best. We at the CAI see a long path ahead of getting people actively involved and committed to establishing a network of training advisory bodies which can set agreed strategies. At state levels where the action is going on we want to get involved in development and planning and associated activities.

CSBs are not isolated groups, but one part of the main training reform agenda. We believe, based on our experience of 'learning by doing' it would be a shame if in the NTB's review in 1992 of the whole process it did not get what information it could and use it to develop a training package to give Competency Standards Bodies a better understanding of what it is they are trying to do.

Relationship between CSBs and NTB

The NTB has to take an active role in the establishment of the measuring criteria and other items for assessment, as that is fundamental to the establishment of competency standards. CSBs are a different ball game and as a consequence, special care is needed in framing

competency standards of a generic nature such as occupational health and safety skills because of the wide variation of skill and responsibility levels of users. There is a need for guidelines to make the competency standards user-friendly, because if they are not and the format used is daunting the standards will remain in gold-leaf backed binders on the shelves, with the gold untarnished.

Thought needs also to be given to the question of accessibility. Work needs to done to foster relationships between CSBs working on similar tasks to prevent duplication. We do not need a monumental conference, but rather a good working arrangement and support for it.

From the point of view of the CSB on Workplace Trainers the inclusion of training functions and career structures and the way the Competency Standards will help this, is an issue which must be addressed if the training reform process is to be carried through. It must become part of the normal career development to spend time in a training function - a desirable experience. When this happens there will be support for the development of a learning culture in industry.

Summary of points made

1. CSBs are part of a three legged stool, providing the basis of employer and industry involvement in the training process (probably under the umbrella of an ITAB):
   - setting competency standards;
   - establishing training strategy and curriculum guidance;
   - practice in the job, with assessment as a binding mechanism.

2. In the initial stages there may well be a proliferation of CSBs to set competency standards. These should, after the initial stage, be collapsed into manageable industry groupings of ITABs (20 - 30) for continuing maintenance and review.

3. CSBs should be consulted by the NTB to guide the outcome of the proposed review of the framework/guidelines etc, which is a reversal of the initial role of the NTB in directing and guiding CSBs. This was understandable, but it should not become the norm.

4. Guides need to be established to make competency standards user-friendly and thus useful.

5. NTB should foster networks to avoid duplication and promote self-help.

6. Special care is needed in framing competency standards of a generic nature because of the wide variation in skill and responsibility levels of users.

7. A measure of the success of pursuing competency standards will be their use - this will require continuing marketing and PR. We do not want them adorning gold-leaf backed binders on a shelf somewhere as beautiful ornaments.

8. Lastly, but importantly, members of CSBs should be provided with training and guidance in their task.

CLERKS' TRAINING MODEL PROJECT

Clarice Ballenden - Clerks' Training Model Project

The Clerks' Training Model Project describes the skills of clerical-administrative workers in competency terms. The competency framework which forms the training model links training to identified industry needs, and establishes bridges between training which takes place at work and institution-based training. The original impetus for this training model came from the restructured Victorian Clerical and Administrative Employees' Award.

There were only three categories of skills recognised in the Victorian Commercial Clerks' Award - filing clerk, general clerk or stenographer (this probably reflects the fact that this is a female dominated area and demarcation and skills differentiation were not part of this workforce). The competency framework lists eight specialised skills (or skill areas), and the seven groups (or grades) of skill within each. The structure shows increasing difficulty within skill areas and an increasing range of skills.

Clerks are a multi-skilled workforce whose skills are often not recognised and usually undervalued. They receive training from a range of providers - a large number learn their skills on-the-job.

The format of the competency framework follows that of the National Training Board. Each skill area is broken down into **units of competency** which are then divided into **elements of competency**. The **performance criteria** provide evidence that the employee can perform a task to the standard required in employment.

There is no problem selling the framework to individual workers, as it is obvious how they will benefit. Employers on the other hand are interested in the application of the framework as a human resource management package. The standards can be used to devise position descriptions or provide a profile for the person/position. The employer is then able to match the person against the position requirements and see where skills gaps need to be made up through training.

The Clerks' Training Model Framework (Part A) and Report are available for purchase. They can be bought from:
The Council of Adult Education (CAE) Publications
256 Flinders Street
Melbourne Vic 3000
Phone orders (03) 652 0714.

Further information about the Clerks' Training Model and Associated projects is available from the Information Officer on (03) 655 3112.

COMPETENCY-BASED TRAINING IN THE APS

Diana Paton - JAPSTC Secretariat

One of the major points I want to emphasise today is that JAPSTC - the Joint Australian Public Service Training Council - is introducing all aspects of CBT into the APS. A second point is the complexity of this task.

Origins of JAPSTC are in the APS SEP agreement. The agreement created new integrated and linked classification structures for the APS. (Diagrammatic representation of the major structures is in the background material.) The main features of the new structures are:

- 1,760 former trade and related classifications were translated into one 10 level General Service Officer structure;
- 30 professional classifications were translated into one 5 level structure;
- 30 technical and related classifications translated into one 6 level structure;
- a Senior Officer Structure (SOS) was established under the SES. The SOS includes the top 3 levels in the ASO and Professional structures and top 2 levels of the technical structure;
- the Administrative Service Officer structure was created under Office Structures Implementation (Tier 2 negotiations) when the clerical classifications were incorporated into a single 8 level structure.

Council's terms of reference are in the information provided. Cabinet has approved funding of $6m for 3 years only (July 1990 to June 1993).

Council has 12 members and meets every 3 months. It is serviced by two units, an Administrative and Information and a Research and Co-ordination. These are located in the PSC.

A competency-based approach was adopted by Council although its terms of reference indicated a skills audit approach to identifying training needs. The skills audit approach was considered inappropriate for an organisation the size of the APS.

Council also decided to focus on those competencies which are service wide within each structure, ie those which are common to all jobs in the ASO or GSO or Tech or Prof structures at each level. Agency specific, or job specific are being developed by agencies. In order to enhance career paths linkages between the structures will also be explored.

The NTB definition of competence has been adopted, namely:

> *the ability to perform activities within an occupation or function to the standard expected in employment.*

As a first step Council endorsed several projects which will identify service wide competencies for the major structures.

A Steering Committee comprising representatives from management and unions is responsible to Council for the overall management and direction of each project. The work undertaken by a project manager and a project team with access to a consultant for specialist advice and expertise. Such advice may range from facilitator training, the number of groups to run, the composition of each group, data management to validation procedures.

The competency projects have all adopted an expert group approach to collecting the data.

The facilitators who lead each group have been selected from within the APS and trained by the consultants. Some projects are also using a one to one interview technique to complement the group process.

This process will collect details of the work performed; skills, knowledge, attributes required to undertake the work and performance criteria.

The data collected will be analysed and reworked as competency statements. These will then be validated throughout the service:

- the projects are at various stages, broad details have been included in the handouts;
- draft competencies for the SOS structure and human resource development practitioners have been circulated within the APS as a basis for further consultation;
- a research project in relation to the training needs of youth and new entrants to the APS is being presented to Council today. The information collected is already being used to assist in developing new flexible entry training arrangements for the ASO structure;
- it is anticipated that all competency identification projects will be completed by April next year;

Council is now focusing on other aspects of the CBT and the Training Reform Agenda, eg:

- how these competencies can be translated into best training; is it possible to use existing in-house courses, are existing publicly provided courses appropriate; do we develop our own courses; do we go outside to get them developed;
- where is the training to be provided, in-house or elsewhere, on-the-job or off-the-job and who is to do the actual training.

Issues such as assessment, accreditation, certification, RPL, relationships with education providers are also being explored.

Issues

- awareness raising throughout the APS;
- numbers, geographic spread and diversity of classifications within each of the APS structures;
- unique structures, levels within the structures, and linkages between the structures;
- the relationship between the competencies, classification guidelines and work level standards;
- time frame; JAPSTC is funded only till 1993;
- NTB preferred option of a public administration CSB which includes federal, state and local government;
- framework of a competency statement, task oriented or skills and knowledge or SKA approach;
- common framework which is appropriate to the base of the GSO to the Professional A;
- co-ordination across all projects which are at different stages
  - language;
  - consistency in framework;
- linkages to developments in CBT related issues elsewhere, eg
  - other competency development projects, eg metals, NOOSR, trainers, managers, supervisors;
  - assessment, RPL, curriculum development;
- JAPSTC does not want to duplicate work that is already going on. It would prefer to link in and co-operate with this work.

SOCIAL AND COMMUNITY SERVICES COMPETENCY METHODOLOGY PROJECT

Cathy Emery - Social and Community Services ITB, Victoria

Introduction

This project has been driven by the need to develop a method for approaching competency issues in the Community Services Industry across Australia. The major focus of the project is developing a nationally consistent framework for analysing skills, identifying and describing competencies and setting standards in the industry.

Community Services is characterised by a number of features which make this focus important, and it is worthwhile providing a little background on the broader context of the project.

Context

The major contextual factors impacting on this project are the nature of the industry, the IR context and industry attitudes towards a competency-based approach.

1. Nature of industry

   It has only been relatively recently that notions of a Social and Community Services industry has been formally recognised as a discrete industry. At the same time, the industry has experienced a rapid expansion, and a major shift from employment in large institutions to community based services, creating huge demands for skills development. It has also seen a transition from a largely volunteer based workforce, to more mainstream employment practices, placing these skill requirements in the industrial relations context.

   The industry is also characterised by its traditional focus on client needs, rather than the needs of its workforce. Much of the work involves skills which are undervalued, and many of its workers have no formal qualifications, are poorly paid and are working in insecure positions.

   In the current climate, this has resulted in huge demands for skill development, but with very limited information about what the specific skill requirements may be. There has been little formal research on the identification of components of work in Community Services, and few major skills analyses for occupations in the industry are available.

   There are also relatively weak or new structures for organising changes to training arrangements in the industry, for example a national industry training advisory structure is not expected to be established until early next year. It is clear that this industry is starting at an earlier point than many other industries in looking at competency issues.

2. Industrial relations context

   The IR context in the Community Services Industry is characterised by:
   - a high number of unions having coverage in the industry. This varies from state to state, but there are 11 in Victoria, with 17 awards covering workers in the industry;
   - many of the relevant awards are state based, rather than federal awards;

- there has been vastly different progress made on award restructuring throughout the industry;
- in some states there are still award free areas of the industry.

The IR picture is, then, fragmented, and results in uneven understanding of competency issues and an uneven drive for change.

3. Industry concerns about CBT

Moves towards a competency-based approach to education and training have largely been perceived as a top down process, which industry organisations and even educationalists are still coming to terms with.

The pace of this change has also raised some issues. The SACS ITB in Victoria has found it has already had to consider the practicalities of standards development, which has taken the form of this project. The focus on practicalities is occurring at the same time as the industry in Victoria is considering the appropriateness of the approach in the SACS industry at all.

The ITB has recently been working on gleaning industry attitudes to CBT. This research has revealed a number of concerns about the appropriateness of this approach in the SACS industry. The major concerns include:

- a focus on observable outcomes undermines the thinking processes and depth of understanding informing actions;
- a functionalist approach ignores the complex and dynamic skills critical in SACS work;
- the approach may ignore the place of values, ideology and theory which inform practice;
- a focus on quantitative measures is inappropriate to the qualitative nature of the skills employed;
- much of the curriculum for occupations in the industry is developed from an integrated approach, and is not amenable to division into discrete units.

The way in which these, and other issues, are tackled in CBT work will clearly impact on industry acceptance of the outcomes.

In terms of the broader context, it is worth pointing out there are some projects currently underway on competencies in the industry - the National Youth Core Curriculum Project and the National Social Work/Welfare CBT project are good examples.

The project

The SACS Competency Methodology Project aims at addressing some of the issues raised by the broader context, while working with those currently involved in relevant projects. The project itself aims to foster a consistent approach in the identification and development of competency standards in the Community Services Industry across Australia.

A National Steering Committee, with representation from relevant industry interests, has been established for the project.

The work of the project, and its outcomes, are divided into three stages, of roughly six months each. The outcomes are:

i) **Development of an agreed framework for competency work**

This involves work in two areas:

1. Policy Framework
   The policy framework will identify and describe an industry accepted framework for policy issues encompassing the project.

   These include relevant policy initiatives, work to date, identifying key parties and consultative structures, issues for the SACS industry, scope of the project, etc.

   The policy framework will be completed in the first stage of the project, ending in April 1992.

2. Competency/Standards Framework
   This involves developing a framework for the description of competencies and standards. This framework, developed in line with NTB guidelines, will address issues such as:
   - an industry definition of competence;
   - specification of what competencies look like in the industry (eg NOOSR model, task models).

   This work will start in the first stage of the project, and be finalised in the second stage.

ii) **Development of guidelines for undertaking occupational analysis, and identifying and describing competencies and standards**

This will be documented in a manual comprising:
- review of techniques;
- guidelines for the process, eg, who should be involved;
- formalising the competencies/standards framework.

This work will dominate the activity of the second six months of the project, ending in October 1992.

iii) **Trialing the methodology developed in two SACS industry sectors**

This stage of the project will involve applying the framework developed to two industry sectors, and will involve close work with the relevant parties. This will be documented, and will result in modifications to the manual developed in Stage 2.

The trialing comprises the final stage of the project to be completed in April 1993.

A number of other outcomes and products will be generated as the project progresses.

Other outcomes:
- national consultative network established;
- increased industry awareness of issues;
- industry commitment to methodology and framework developed;
- consideration of equivalences with other industries.

Products:

- Policy Framework for considering competencies/standards in the SACS industry;
- Competency/Standards Framework;
- Manual/guidelines for conducting skill analysis, and identifying competencies and standards in the SACS industry;
- trialing the methodology - Report.

Benefits:

The benefits of the project in the context of the SACS industry, particularly in relation to the national training reform agenda, will include:

- facilitating industry efforts to undertake skills analysis, identify competencies and set standards, in a way which meets the specific needs of the industry and is consistent across the industry;
- facilitating TNA;
- facilitating work mapping competencies with training including assistance with meeting accreditation requirements;
- assisting in job redesign and award restructuring efforts;
- facilitating the introduction of RPL arrangements;
- assisting with the development of mechanisms to improve information needed for the planning of training;
- facilitating the identification of skills, which will raise awareness of the traditionally undervalued skill base in the industry.

Issues

While the project is still in its infancy, some of the more critical issues which have already emerged include:

- ensuring the competency/standards framework developed is acceptable in a human services context. This includes determining a means for considering the place of an integrated knowledge base, understanding of theory and depth of knowledge, and the place of values and ideology in SACS work;
- exploring issues around qualitative v quantitative approaches to setting standards;
- ensuring the approach is consistent with the application of CBT, eg, assessment, curriculum development.

I look forward to maintaining contact with others grappling with these and related issues and hope some of the information brought together in this project will also be useful to workers in other areas.

THE FEASIBILITY OF EXPRESSING GENERIC MANAGEMENT SKILLS AS COMPETENCIES

Billie Slater - Australian Institute of Management

The issues addressed by our project, namely, the preparation of a generic list of supervisory/management skills and the feasibility of defining and assessing these skills as competencies, are extremely important because despite overseas developments in the area, they have not been previously addressed in Australia.

The investigation of the feasibility of expressing management skills as competencies has yet to be attempted in Australia. Despite the developments in competency-based training which are occurring in a range of industries and occupations these developments have occurred within the restructuring process to meet the requirements of the Structural Efficiency Principle. In the case of management, which is a professional area common to all organisations, there have been no attempts to define the required supervisory/management skills, nor to develop a competency-based framework of standards which would be suitable for assessment of performance and further training and development.

There is a lot of interest being expressed in Australia as to whether a competency-based training approach at management level is the answer needed. On the one hand, a competency-based approach to training in management would provide a rational, structured and nationally recognisable means of achieving such results. On the other hand there are difficulties associated with the definition of national standards for managers, in that they currently are not represented by industrial advisory bodies, as are other occupations. This issue of the feasibility, or otherwise, of expressing management skills as competencies will be further explored in phases 2 and 3 of this project.

One of the major difficulties in expressing generic management skills as competencies are the difficulties associated with assessment and setting of standards.

According to the discussion paper issued by the TAFE National Centre for Research and Development Ltd (Toop, 1991:2) the assessment in a competency-based system *is the process of obtaining evidence about an individual's performance against the element and performance criteria and making judgements on that evidence. The difference between the general approach to assessment and that of a competency-based one lies in the explicitness of the criteria set down for satisfactory performance, the emphasis on the demonstration of the competency in question and the relationship of the performance criteria to the expectations of the workplace.*

Occupational competence is therefore defined and assessed in terms of observable skills. Each skill suggests an appropriate assessment task. Prescribed standards are the required level of performance on the prescribed task. It could be argued therefore that this procedure best lends itself for use in technical occupations where the skills are easily definable and are standardised across the industry (eg the automotive, engineering and hospitality industries). In the professions, where skills are related more to professional judgement which is based on the consideration of complex pieces of information, then standards which are based on broadly-defined areas of professional competence would seem more appropriate (Masters and McCurry: 1990;2).

The assessment or measurement of management skills raises many questions. Where does such assessment take place? Is it conducted in the workplace? Or does it occur in a training institution? Is it related to a national standards framework? And who owns this standard? The consideration of these questions and the development of answers to them will shape the nature of the assessment procedures and the prescribed standards for management.

In training institutions, such assessment is related to accredited qualifications. In the workplace the assessment takes place in many forms. It can occur at an assessment centre, it can be an appraisal process related to performance. Some organisations use this process as a performance management system and relate it to salary and promotion; others use it to identify opportunities for future development of staff as is the case with the management development program now being used by NRMA in Sydney. Other organisations link their performance management system to their strategic planning process and to the specific objectives. These in turn are written into job specifications.

A greater emphasis on the assessment of workplace skills rather than theoretical knowledge will imply a greater use of more direct assessment methods based on realistic professional tasks, and less use of relatively indirect methods such as paper and pencil tests. The need arises when using such a system to continually review the assessment procedures for their on-going relevance, reliability and validity.

The question which arises is: *Is it possible to assess management skills against prescribed standards?* The draft document prepared by the TAFE National Centre for Research and Development Ltd, entitled *Developing Competency-based Assessment Instruments* states that competency-based assessment which meets the needs of the national competency standards framework:

- is based on competency standards defined by industry and endorsed by the National Training Board;
- includes industry agreement on the amount of evidence that is regarded as sufficient to infer competence;
- emphasises direct observation of work activities supplemented by assessment of knowledge and thinking (problem solving) skills;
- involves the use of a range of assessment instruments;
- requires the person being assessed (candidate) to be fully informed about the assessment procedures including information on the criteria for successful performance;
- requires a reporting system which details the competencies successfully achieved by the candidate.

We would maintain therefore, from the research undertaken to date of the theory and practice of management that management skills, because they cross industry and occupation boundaries, cannot be assessed against prescribed standards within the national competency standards framework unless and until we have in place:

- acceptance of the assumption that it is possible to have a standard set of managerial competencies across various styles and sizes of industries, companies and operations;
- agreement that there is sufficient commonality across industries in the elements and performance criteria (and the range of variables for performance);
- a framework for developing competency standards for managers across industries, and for their endorsement by the National Training Board;
- agreement across industries on the amount of evidence that is regarded as sufficient to infer competence.

The other needs of the competency standards framework defined by TAFE National Centre for Research and Development can certainly be applied to assessing managers' performance at each level. However, because the elements of competence will vary in and between enterprises, a national framework for performance measures may not be possible, unless mechanisms for defining managerial competency standards and assessing their performance across industries can be agreed upon. Assessing management skills will, therefore, by necessity, be *enterprise* specific both in the assessment instruments used and the prescribed

standards reached. It must also be acknowledged that if any such national framework is to be recommended, then it must be prescriptive enough to meet the guidelines laid down by the NTB and yet flexible enough to meet the needs of individual industries and enterprises. Such a framework may prove to be cumbersome, bureaucratic, and, while having the appearance of rigour and accuracy, be based on the assumption that it is possible to have a standard set of managerial competencies across various styles and sizes of industries, companies and operations.

Our completed research suggests that it is possible to have a list of generic management skills which are applicable to the management career path. The process for setting standards and measuring/assessing these skills is one which is best accomplished in the workplace. Most of the management skills are best demonstrated on the job. The demonstration of theoretical knowledge could be assessed off-the-job.

In order to explore this issue further we are holding a *Focus* group meeting with practising managers early next month to ascertain how their organisations measure management performance and how standards are set for managers.

Our conclusions are in line with the results of the concurrent research being conducted by the Australian Committee on Training Curriculum (ACTRAC) on the Management Curriculum Modules by Dr David Paris. Both studies have concluded that there is an agreed list of generic management skills. However, because these skills are highly context specific even within the same enterprise, they cannot be assessed using national standards. The critical variable in assessment is the level of performance required in the workplace.

If, however, it is considered that a national system for assessing management skills is deemed necessary to improve the management role in Australia, then such an assessment system would need to be work based, flexible and administratively simple. Some issues which may need to be considered for the assessment of management skills in the workplace include the following:

- the need to identify and agree on a set of generic management skills;
- training programs need to be designed in a competency-based format using the identified generic management skills;
- certification and accreditation processes need to be established for the training programs;
- the integration of on- and off-the-job training components;
- the development of integrated assessment procedures which include the recognition of training and prior learning;
- the management and monitoring of a competency-based training system;
- the need to review the nature of the competencies for the maintenance of their currency and value in the development of appropriate management skills.

Session 4
Training programs in CBT

THE PROVISION OF TRAINING IN THE DELIVERY AND ASSESSMENT OF COMPETENCY-BASED TRAINING

Hugh Guthrie - TAFE National Centre for Research and Development
Doug Gilham - National Centre for Competency Based Training

CBT Workshop Design

Two related projects are being conducted by the TAFE National Centre for Research and Development in Adelaide and the National Centre for Competency Based Learning based at Richmond College of TAFE, Victoria. They are designed to examine needs and alternatives and then develop workshop programs and their associated resources for delivery in up to twelve specified areas or fields of study. The workshops will be designed to prepare for the implementation of competency-based training so that teachers, trainers and instructors in both TAFE and industry are assisted in the development of:

- instruction skills for design and implementation of competency-based training, with reference to the National Training Board's (NTB) Australian Standards Framework;
- skills in the assessment of competence in an integrated *holistic* fashion;
- production skills for the development of competency-based training packages and materials; and
- management skills for the delivery and assessment of competency-based training, including student enrolment and management systems, the role of instructors, organisational arrangements, financial management systems, and techniques and approaches that enhance integration of workplace and off-the-job training.

The project will be:

- identifying the feasibility of the project;
- providing advice on priorities for the fields of study/areas selected;
- designing, developing and producing the workshop packages and associated resources;
- evaluating the projects;
- supervising the reproduction of the packages and materials; and
- delivering the workshops.

Outcomes of the project's initial consultative process

- many people know relatively little about CBT and are worried about the innovation and what it means for them;
- practicalities are important;
- it is important that teachers be prepared for the significant change in their roles;
- assessment is a critical process which few really understand;
- there will be diversified delivery processes for training;
- there has been little integration of on-the-job and off-the-job training and this is an issue that needs to be urgently addressed;
- we are in grave danger of losing the momentum of change unless practical help is given immediately.

Session 5
Assessment and recognition

ASSESSMENT MODELS APPROPRIATE FOR COMPETENCY-BASED TRAINING AND THEIR RELATIONSHIP TO TEACHING AND LEARNING APPROACHES: AN INTERIM REPORT

John Whiteley and John Dungan - Office of VETEC

Introduction

This report brings together some of the emerging issues and interim findings from research work carried out into assessment practices in competency-based training (CBT) and presented in the following paper:

> *CBT: Assessment models appropriate for competency-based training and their relationship to teaching and learning approaches*

Research methodology

Two major pieces of research were undertaken in this pilot project with the aim of merging the theory and practice regarding teaching, learning and assessment practices in CBT. The first research activity was a review of recent published and unpublished literature in the area of teaching, learning and assessment practices in CBT. This literature review highlighted important issues relating to CBT and assessment and these issues were developed and brought together into a theoretical framework.

The second major research exercise was to undertake five short case studies which examined CBT and assessment issues in 'real life' contexts. These contexts included TAFE colleges and industry and private providers of training, where CBT has been operational for some time. Case study sites featured are:

- Stanwell Power Station, Rockhampton, Queensland;
- Marine Engineering Training and Research Centre, Melbourne, Victoria;
- Box Hill College of TAFE, Melbourne, Victoria;
- Richmond College of TAFE, Melbourne, Victoria; and
- Associated Pulp and Paper Mills, Petrie, Queensland.

These sites were selected to represent a wide cross-section of providers and industry groups so that a broad view of CBT and assessment issues could be achieved. The case study approach has allowed specific practical issues to be studied 'in the field' and allowed the reported observations of a wide range of parties involved in CBT to be taken into consideration.

The broad theoretical framework identified in the literature review and the important issues emerging from the case studies are merged and some proposed assessment guidelines appropriate for CBT are identified.

Emerging issues from the research literature review

The literature review focused on two key areas: determining the importance of good assessment practices and identifying some important emerging issues.

Good assessment practices highlighted in the literature include the importance of:

- developing criterion-referenced assessment practices;
- developing a 'holistic' approach to assessing competence;
- specifying competency and accompanying standards clearly;
- assessing according to industry standards using activities that are work related;
- trying to ensure assessment is accessible on demand;
- recognising competence no matter how or where it was acquired;
- ensuring assessment practices are in harmony with broad teaching and learning approaches employed in training programs;
- maintaining accurate, reliable and effective assessment records;
- encouraging students to engage in their own self-assessment;
- developing and selecting valid, reliable and efficient assessment procedures; and
- ensuring that assessment practices are just and equitable.

Other issues relating to assessment and CBT that need further investigation include the importance of:

- identifying an acceptable definition of competence;
- determining elements of competence that should be defined and assessed;
- investigating the extent to which criterion-referenced assessment is used on-the-job;
- developing ways of ensuring a substantial measure of validity and reliability in assessment;
- highlighting the best person or persons to undertake the assessment of individuals in given situations;
- identifying assessment methods that are just and equitable to all parties involved in assessment;
- confirming standards of on-the-job assessment; and
- defining competence of on-the-job assessors to perform their task.

Case studies

Research carried out as part of the case studies identifies several emerging issues regarding assessment and CBT.

- Assessment practices should include a moderation system to confirm that assessment standards between assessors are being maintained.
- A computerised management system is a valuable and efficient method of recording and monitoring student progress through a CBT course.
- Clear instructions highlighting the 'performance conditions and standards' required for students to be assessed as competent should be set for all written assessment.
- Students undertaking on-the-job training require support from suitably trained personnel.
- On-the-job CBT linked with assessment on-the-job is considered valuable by students and employees and would appear to assist in developing a well-trained competent tradesperson.
- The performance, conditions and standards required in assessing competence have to be specified clearly to all parties involved in the assessment process. These parties include assessors, trainees, students and employers.

- In developing and implementing assessment practices in CBT, excessive demands should not be placed on students.
- Teaching, learning and assessment should, where possible, reflect work conditions.

After considering the implications of these issues, raised in the literature and emerging from the case studies, a series of guidelines regarding good assessment practice in CBT were drawn together in the final paper. Some suggested practices are included within each guideline which are drawn from specific examples of good practice identified in the case studies.

Some suggested guidelines of good assessment practice in competency-based training

Guideline 1: Detailed instructions should be prepared which specify clearly the performance, conditions and standards required for students to be assessed as competent.

Some suggested good practices:

- Assessment guidelines should specify exactly the performance, conditions and standards required for all assessment practices. This leaves the assessor and student in no doubt as to the required standard that has to be achieved to be considered competent.
- Moderation systems are in place to help ensure that assessment standards are being maintained.
- Realistic allocations of time are allowed for students to complete assessment tasks.
- Standards should be written in an objective form in order to state with certainty what is required in the assessment process.
- Detailed guidelines for written assessment practices should be provided for students. This can help to prevent students from allocating inappropriate lengths of time on written assessment activities.

Guideline 2: Assessment practices in CBT should be valid, reliable and efficient

Some suggested good practices:

- Validity is enhanced by making assessment tasks duplicate those encountered on-the-job.
- Detailed assessment guidelines should assist assessors in implementing assessment practices consistently over time.
- Standardised procedures for collecting and recording assessment information should enhance efficiency.
- If students, having completed a written assessment, are found to be 'not yet competent', they should not be retested using items employed in previous tests.

Guideline 3: A 'holistic' approach to assessment in CBT should be adopted

Some suggested good practices:

- Students are required to demonstrate they are competent in each element of a competency.
- Students should not be required to demonstrate competence in every performance criteria that is identified in an element of competence. Demonstrating competence within a sample of these performance criteria is considered sufficient, in most cases.
- Performance criteria are not assessed in isolation from each other.

Guideline 4: Competence should be recognised no matter how or where it was acquired

Some suggested good practices:

- Students do not have to undertake parts of a course if they can demonstrate they already possess the necessary competencies.
- Students can attempt a challenge test to demonstrate they have the necessary knowledge and skills prior to undertaking a given module.

Guideline 5: A system of recording assessment information should be adopted that is easy to manage and access

Some suggested good practices:

- Computerised management systems can provide up-to-date records of student progress through a course. These are particularly valuable in a student self-paced learning environment.
- Students have their own hard copy record of current assessment information detailing their progress.
- Students have ready access to the competencies they have attained within a course.
- Teachers develop different methods or recording assessment information, including computer-based records and individual student files.

Guideline 6: Assessment practices should match, as closely as possible, what happens on-the-job

Some suggested good practices:

- Where possible, students are assessed on-the-job. This allows them to demonstrate the practical knowledge, skills and attitudes that are required in the workforce.
- Assessment methods are selected that most closely match on-the-job conditions. This is achieved by using simulations or by undertaking projects that reflect on-the-job tasks.
- Written assessment activities are not used if practical assessment methods are more appropriate.

Guideline 7: Students should be encouraged to monitor their own learning in CBT

Some suggested good practices:

- Students are encouraged to engage in continuous self-appraisal and self-development.
- Self-tests are made available to allow students to see how well they are progressing through a unit of study.
- Students undertake readiness tests prior to undertaking major assessment activities.
- For students undertaking self-paced learning, assessment is a consultative process between assessor and students. Together they decide when assessment should be conducted and what preparation is needed. This allows students to progress at their optimum rate through a course.
- A computer-managed system allows easy administration, marking and recording of assessment information. It also provides students with immediate feedback on their performance and access to assessment records.
- When student self-paced learning is used, students have a flexible time-frame for completing assessment activities.

Guideline 8: Assessment practices should be in harmony with the broad teaching and learning approaches employed in CBT

Some suggested good practices:

- Assessment practices only examine competencies covered in a unit.
- Written assessment practices, such as assignments, allow students to relate answers to their own work situation.
- Assessment is an integral component of the teaching and learning process providing students with timely and meaningful feedback.
- Assessors employ a variety of different assessment practices, not only those which are easy to administer or those with which they are familiar.
- Assessment is a time-consuming process and students are not encouraged to undertake assessment practices unless they are prepared, since regular negative feedback only serves to discourage students.

Guideline 9: Assessment practices in CBT should be just and equitable

Some suggested good practices:

- Assessors ensure that assessment practices are appropriate for the skills and knowledge being assessed.
- Assessors do not judge students but focus on what students can do.
- Cut-off 'scores' determining competency are not arbitrarily set, but reflect the skills and knowledge being taught.
- Assessment practices are used to enhance student motivation.
- Teachers listen to students' concerns about teaching, learning and assessment and act on them where appropriate.

ASSESSMENT IN THE WORKPLACE: CHALLENGES AHEAD

Leigh Toop - TAFE National Centre for Research and Development

There is an increasing demand for assessment in the workplace

- to assess an employee's progress in a training program conducted by the enterprise;
- to assess a trainee's progress in a training program jointly conducted by a training provider and the enterprise;
- to align an *unqualified* employee to the appropriate award classification;
- to recognise current competencies of those under-employed or employed at an inappropriate level for more appropriate classification;
- to gain recognition of additional competencies gained for purposes of broadbanding, multiskilling or career path change.

There are five ways of enhancing consistency in assessment decisions made by workplace trainers and supervisors

- specify required performance clearly in the competency standards (easier perhaps to do with technical skills than either organising and co-ordinating skills or communication and interpersonal skills);
- Provide guidelines for assessors outlining

how much evidence
what type of evidence
} is needed to infer competency

→ assessment method

- develop and provide assessment instruments for use by workplace trainers and supervisors (eg observation checklists, oral questions, product checklists);
- provide training in assessment for those making assessment decisions;
- incorporate an external moderating or validation system using industry monitors.

Securing industry and enterprise acceptance of this new assessment role

- a real marketing challenge
- need to ensure that industry (through the CSB or ITAB) takes key assessment decisions and supports and owns the process

Problems which we face and factors influencing them

Problem: Industry/enterprise reluctance to carry out consistent, rigorous assessment

Factors:

- resistance to taking on a new role not directly linked to productive activity
- diversion of resources towards assessment activity - costs of assessment
- limited awareness of competency standards and what improvements are expected to flow from their adoption.

Problem: Industry/enterprise reluctance to carry out consistent, rigorous assessment

Factors:

- no obvious benefits for the enterprise;
- supervisor's concerns about assuming the role of assessor;
- supervisor's concerns about their adequacy or preparation for this role.

Where next?

Strategies will need to be developed to secure industry and enterprise acceptance of assessment role.

Who will plan, design and implement such strategies?

Without industry and enterprise acceptance of their assessment role the CBT system will founder.

CLERKS' TRAINING MODEL PROJECT AND ASSOCIATED PROJECTS ON ASSESSMENT

Janet Scarfe - Clerks' Training Model Project

The Clerks' Training Model Project describes the skills and training needs of the clerical workforce, in a *competency framework.* To date competency statements for *industry specific* skills (identified in the Victorian Clerical-Administrative Employees Award, restructured in December 1990) have been researched, tested in the field and published. The competency statements for core generic skills (Part B) is currently being done, and will be available in mid 1992.

Two projects associated with the CTMP are:

(1) Self-Assessment Questionnaires (funded by the Women's Research in Employment Initiatives program);

(2) Competency-based Assessment Practices in the Workplace (a pilot project funded by the Competency-based Training National Secretariat).

Both are examining assessment of the clerical competencies set out in the Framework.

1. **Self-assessment.** The clerical workforce is predominantly women. Research shows that women undervalue their skills and tend to describe them in terms differently from the way men do (a 'mythical' example - *helping in the tuck shop* versus *distribution of large quantities of food to large numbers of children on a regular basis*). Clerical employees have often developed their skills on the job, in the workplace, at home, or in community organisations - the extent of formal qualifications is relatively low (approx 30%).

Self-assessment questionnaires have been generated from the competency statements in the framework. The initial task was to do this for the first three of the seven skill levels or grades, but subsequently (the skill levels range from basic entry level to sophisticated). This has presented quite a challenge.

People are asked to complete the questionnaires using a **key** - *new skill; upgrade needed; good; one of my strengths!* The key is not a grading system - strength is needed to prevent statisticians *norm referencing* the results, trying to average results that cannot be averaged. to do that is to distort the purpose and nature of the self-assessment questionnaires.

The questionnaires have been field-tested, that is, trialled in the workplace, and the response has been very positive.

Respondents are delighted at recognising the number and diversity of skills they have acquired, often unconsciously, on the job or through involvement in community organisations, etc.

What will people do with the self-assessment questionnaires? Put them in the bottom drawer? Discuss them with peers/colleagues then or late on, or with supervisors . . . about their position or career path, use of their skills. Most particularly in the context of the CTMP, self-assessment is seen as a first step towards more formal assessment of skills. It is therefore strongly connected to the other project associated with the CTMP - competency-based assessment practices in the workplace.

2. **Competency-based assessment practices in the workplace.** The object of this project is to develop processes for assessing skills in the workplace using the clerical-administrative competency framework, primarily through the development of a manual for assessors.

Assessment is a controversial issue. The most appropriate method appears to be what the literature describes as *naturalistic observation, supplemented by questioning.*

We are aiming for a model of workplace assessment that is:

- simple, that is, as informal as possible;
- negotiated between employee being assessed and the organisation/supervisor;
- equitable;
- cost effective;
- compatible with normal work patterns in the workplace, that is, causes minimal disruption;
- non-threatening and open (the competency framework is widely available to all involved);
- closely related to training, especially to the identification of training needs;
- as appropriate to *specialised* or industry/occupation specific skills as to generic ones;
- appropriate to diverse settings (clerical employees work in all industry sectors and in all sizes of business.

These are the characteristics of the framework itself.

What is needed then to complement the framework to enable supervisors to use it to assess clerical-administrative skills in the workplace?

- a tailor-made introduction to using the framework with
- a brief, user-friendly guide to assessment, with particular attention to national, industry and personal standards, observation skills, communication skills such as giving feedback (bearing in mind that research shows that assessors rarely read instructions)
  or?
- a fairly formal (weighty?) manual
  and/or
- a workplace assessor training workshop (such as that run by the hospitality and tourism industry).

Other issues which must be addresses include criteria for assessors, an equitable appeals process, the flexibility and simplicity of the process.

This project may also result in refinements to the competency statements, such as to the performance criteria, the inclusion of assessment criteria, and guidelines for assessors.

GUIDELINES FOR ASSESSING AFFECTIVE SKILLS

Ray Orr - Mount Gravatt College of TAFE
Stephen Billett - Training Initiatives Branch, BEVFET

Picture a boilermaker at work in a large engineering workshop, fabricating a steel frame. The worker is using an electric MIG welder on near continuous duty. The arc is quite intense and a number of other employees are working in the area, thus creating a hazard where eye damage could occur. Welding screens are provided but the worker has not used them - why?

Picture also a retail variety store employing a relatively large number of checkout operators. A particular operator is serving you as a customer and recites the required greeting: *Good morning, how are you today?* in much the same manner as a talking doll, a form of superficial compliance. What is also successfully conveyed to you, the customer, through tone of voice, lack of eye contact and general body language, is that the worker is not the least bit concerned whether your pet canary just died or you have contracted the plague!

Are these employees competent? If we consider their effectiveness from the employer's perspective, however, it is quite possible that they have been labelled *competent*. Our approach to vocational education has tended to focus on knowledge and physical skills. It is likely that in order for our two workers to get their jobs they would have passed some tests covering these areas. Attitudes however, are often only introduced *when they are called for in performing the task* (Blank, 1982:100), but there is no provision for developing these attitudes or associated affective skills.

You will recall that the term affective is derived from the *Taxonomy of Educational Objectives* (Bloom et al, 1956). Three domains were identified:

- the **cognitive** domain - knowledge and mental activities or thinking skills;
- the **psychomotor** domain - physical or manual skills; and
- the **affective** domain - emotional or interpersonal skills.

While we do not think or act in three different ways, stating our goals or competency standards in this way helps to identify clearly, both the objectives and how to train and develop people.

A broader definition of competence is needed which includes cognitive, psychomotor and affective skills, and a capacity for the social roles we must fulfil, eg self confidence (Block, 1978). Affective skills are the core of this project.

The research project

Mr Stephen Billett, the Executive Officer of the Award Restructuring Co-ordination Unit of BEVFET, initiated this research project which was to *determine and illustrate methods and strategies to assess affective elements of skills.* The successful implementation of competency-based training requires such comprehensive identification and assessment of the skills associated with competency. Mount Gravatt College of TAFE was awarded the project in June 1991, with the report to be completed within six months.

Four project objectives were outlined, which were, in brief:

1. to conduct a literature review;
2. to develop some guidelines for assessing relevant affective skills in specific occupational groups;

3. to develop/trial some assessment instruments (checklists) for the specific affective skills that are identified as being important in three occupational groups (private hospital, local government and manufacturing industry);
4. to assess the validity/reliability of the processes and the test instruments, in the three occupational groups.

Literature review - the PBID model

The first contribution was the Affective Work Competency Inventory (AWCI) (Beach et al, 1982). This consisted of a 95 item questionnaire which enabled self and supervisor ratings of a person on 15 competency clusters (eg pleasant/friendly). It has been revised to include only six factors and renamed the Work Attitude Inventory (Brauchle & Petty, 1983). As both inventories focused on attitudes, however, there was a concern about the inability to link actual behaviours to attitudes (Fishbein, 1967:483). This factor, plus some questioning of AWCI uses (Brauchle, 1983) led to a focus on job specific affective behaviours. Other useful material was sourced from the United Kingdom, Australia, the United States and Quality Management literature. An important source was the work of Professor David Pucel, in particular, the PBID - Performance Based Instructional Design system (Pucel, 1989).

> *. . . the PBID system goes beyond (competency-based instruction) to allow for the development of performance-based instruction for the information age and service industries. It provides detailed procedures that designers can follow to develop and evaluate instruction focused on cognitive and affective behaviour as well as psychomotor behaviour. The system can be used to deliver instruction through a variety of formats. It is an integrated system, shown to be learnable by staff and functional in planning . . . teaching.*
>
> (Pucel, 1987:29).

The 7 components of the PBID system are (Pucel, 1989:16):

1. Program description - details of content/context;
2. Content analysis - function identification, behaviour analysis, and behaviour detailing;
3. Content selection - based on time/importance;
4. Content sequencing - arranging in order;
5. Lesson structuring - general teaching plan/format;
6. Lesson delivery formatting - specific methods/media;
7. Evaluation and feedback procedures development.

The term content analysis is used as opposed to task analysis. The latter tends to focus on cognitive and psychomotor skills and is less useful in identifying critical affective skills. Job task analyses identify the characteristics of the **job** as opposed to those of the **people** who do the job well (Spencer,1983:4). Each of the three domains of behaviour also require a knowledge base which must be differentiated from cognitive behaviours such as decision making (Pucel, 1989:19).

The identification/assessment process

Pucel used input from two groups of instructors, and a group of supervisors for a particular occupation, to identify critical affective behaviours in a modified delphi process (Pucel, 1990). Since many occupations do not have teachers, the process was modified to seek input from 3 sources such as:

- group sessions with a small occupational group;
- supervisors; and
- managers or trainers.

Two separate sessions on the process are run with a small group of workers, an approach in line with quality management principles - the person who knows most about the job is the person doing it. Individual discussions are held with the other participants. Pucel's format of verb; object; modifying information, eg co-operate with co-workers, is used (Pucel, 1990). Modifying information is only used where necessary. As an example of behaviour details, with an affective behaviour such as *accept the customer as an individual*, the process/actions and knowledge base required are (Pucel, 1989:66):

Process (Actions)	**Knowledge Base**
1. Smile	1. Recall the importance of customer comfort
2. Control voice volume	2. Differentiate meanings conveyed by types of smiles
3. Select words	3. Recall rules for eye contact
4. Compromise	4. Differentiate body positions and their meanings
5. Position body	
6. Maintain eye contact (no specific order)	

The process results in an affective behaviour checklist (for supervisor/subordinate/self observation, over time), which has been validated by a group process, but is not a pass/fail device in itself. The checklist rating is either acceptable or needs discussion, as many factors affect performance.

Employee performance - contributing factors

Effective employee performance is the goal in most work situations yet performance is not directly linked to competence. We assess performance in order to infer competence (Foyster, 1990:34). Deming (1986:109) states *the performance of anybody is the result of many forces*, hence when reviewing the findings from an observation of affective behaviours, it is important to eliminate the many possible causes for poor performance. Three affective factors are:

1. affective skills - ability or competence;
2. motivation/desire to do the job;
3. values - is the behaviour valued by the organisation and communicated to staff in the way it operates (culture)?

Another point from quality management is that 80% of problems in an organisation are within a manager's power to correct - they are in systems and processes (FVTC, 1990). People get frustrated and switch off if they are unable to do a good job.

Implications and tentative conclusions

1. Given the diversity of backgrounds of workers, it is advisable to incorporate affective skills training into vocational education courses, potentially with certification being provided for a given context. A trial using the PBID system should be set up, possibly involving a visit by Professor Pucel.
2. Assessment of affective behaviours must involve the culture of the organisation, the fact that most of the organisation's problems are in the systems and processes, and the environmental factors affecting motivation. If the checklist is simply seen as a disciplinary tool, the problems will not be solved. The checklist is primarily a tool for organisations and personal improvement. The process should be used only where clear corporate values to guide decisions, and a supportive culture exist.
3. The results from the test sites to date, indicate general acceptance of the process, although it appears to be more applicable in service occupations. The diverse role of a manager may lessen the impact of affective behaviours. Participants have seen this as a developmental exercise which has benefits beyond the creation of a checklist.

INDUSTRY ASSESSORS PROJECT

Sally Davis - Broadmeadows College of TAFE

The industry assessor project is being conducted for the CBT Secretariat. The aim of this project is to develop and implement procedures for on-the-job assessment of competencies by incorporating recognition of prior learning (RPL) with the training of industry assessors by:

- identifying the industry and industrial context relevant to assessors in industry;
- selecting appropriate target enterprises;
- negotiating with enterprise level management/unions to identify industrial issues and developing criteria;
- developing training program(s);
- trialling of training program(s) and resources;
- evaluating and refining of training program(s) and resources; and
- reporting on general conclusions relevant to assessors in industry.

A number of different approaches to assessment in industry have been investigated. At present there is no common approach to assessment as different industries have different structures and conditions. Each industry that is currently engaged in restructuring is addressing the processes that involve assessment eg, the translation process, ongoing training etc, in a different way. This has led to a variety of assessment frameworks and prodecures.

I'd like to discuss a number of issues relating to this project.

Points relating to the application of RPL for training in industry are:
- the industrial context relevant to assessors in industry;
- award restructuring;
- NTB standards;
- Training Guarantee.

Pilot projects were carried out and these pilots drew out certain principles and a framework for assessment of RPL.

A range of variables was developed for assessor programs:
- What will be the affect on those being assessed?
- Why assess? Training, re-classification, promotion, translation of awards, recruitment?

Issues affecting industry assessor programs:
- When to assess? On application, new employees?
- Who assesses? TAFE, supervisors, employers, union representatives?
- How will the assessment be carried out?
- Where will the assessment take place? Workplace, training program?

A general framework must be devised incorporating the following points:
- skills of assessors need to be defined;
- there is a need for training for assessors;
- What will be the process for assessment?
- assessment must be non-threatening;
- standards need to be in place;
- there must be a firm commitment to RPL;

SOCIAL JUSTICE IMPLICATIONS FOR THE DELIVERY OF CBT

Shirley Evans - Holmesglen College of TAFE, Melbourne

1. Project aim:

The aim of the project was to report on current delivery strategies for competency-based training in both on-the-job and off-the-job venues, with a view to identifying the flexible deliveries that best accommodate social justice principles.

The particular focus of the project was on identifying the delivery and assessment processes that increase access to training, although the groups advising the project team recognised that social justice concerns should be included at the course design stage.

2. Target groups:

The groups identified in the project brief as being most likely to be disadvantaged within training systems were the long term unemployed, early school leavers (such as those who had left at fifteen or under), Aboriginal people, people with disabilities, women, and people from a non-English speaking background. It was also recognised by the advisory groups that the level of education and training post year 11 within the community has been limited to date. Issues of access and participation therefore have a wider relevance beyond these specific groups.

3. Research framework:

For the purposes of this project the indicators of social justice implementation were interpreted to mean both *access to training* and *successful training outcomes*. These aspects were recognised to be closely related throughout any training period. Access to training was taken to mean entry into training systems that may take one of several forms; off-the-job, training in the workplace or a combination of both approaches.

To identify appropriate delivery methods in both on-the-job and off-the-job training these issues were explored by several processes, namely:

- exploration of learner characteristics in terms of the education, social/cultural/economic background;
- analysis of the features of competency-based training;
- research on current deliveries both in TAFE and *workbased* deliveries, and of assessment methods. Industry areas included metals, automotive, textiles, hospitality and hairdressing.

As detailed in the project brief, information was mainly gathered by interview method, and it was considered that successful training outcomes are to a large extent dependent on participants' reactions to the learning environment.

4. Findings

4.1 General issues

There are some general issues that should be noted first. Each of these has important delivery implications.

1. The level of competency-based training in industry appears to be fairly restricted.
2. There is a common understanding that competency-based training is synonymous with *self paced learning*.
3. There is a danger that flexible entry points and more advanced technical skills of participants may lead to wrong assumptions being made about their learning and study skills.
4. The literacy and language skills of participants are important considerations in any program delivery.
5. Competency-based training as a system of training faces the same training issues as other training systems. This demands the *accommodation of learner needs* in order to increase access, and success of training outcomes.
6. Issues of access and participation in vocational training are relevant for a larger group of people than just those identified as priority groups in the project brief. (ABS, 1990)

4.2 Findings in relation to assessment and delivery methods

Project findings from our research were categorised under various headings although often these areas were inter-related; access to training, organisation of training, the instructor's role, delivery and assessment methods and program content. Some of the key findings are summarised below.

4.2.1 Access

Access to CBT is related to language/literacy levels, information and selection for training, location of training, support mechanisms, recognition of prior learning and costs of training. People with language and literacy difficulties need to be accommodated within mainstream programs. This could be done with the development of appropriate resource material and the use of support mechanisms (such as group/learning syndicates and instructor/supervisor support).

4.2.2 The role of the instructor

The instructor's role as a *facilitator/manager* of the learning environment is *critical*. This is true of self paced systems as in traditional instructor paced learning systems. To accommodate the possible range of learning needs the instructor has to monitor progress, to assess difficulties with a view to suggesting alternative resources or learning mechanisms, and, if appropriate, use traditional instructional methods. Given that many may be given recognition for existing skills and therefore enter a training program at any entry point, this role necessitates a trainer support role at any time in an established program.

Choice of instructors, particularly within the workplace, may be critical for effective training outcomes. Within industry the use of colleagues as mentors is well received, particularly when they have gone through a train-the-trainer program.

4.2.3 Management of training

If a self-paced system is used, it is important that there is initial support and direction available until the confidence and learning skills of participants allows them to become more self-directed. This support may be necessary *at the point of entry* to training, wherever that is. This support can then reduce in inverse relationship to the increasing control of participants over their learning.

Access to group learning sessions (for example, learning syndicates) is preferred by many groups of people, particularly those who have been outside formal training for some period of time.

The use of computer managed recording programs and assessment instruments needs to be handled with care. Students need to be given assistance in their use in the induction period, as well as a clear understanding of the value of this monitoring process for them.

4.2.4 Delivery systems

A range of delivery modes and resources is appropriate to accommodate learner needs. This may take the form of:

- a variety of learning situations (individual/group);
- options in instructional methods (eg, lecture, demonstration, live work, role play, broadcast TV);
- a variety of resources (for example flip books, slide/tape programs, videos, laser disks, print based information, interactive videos).

4.2.5 Assessment

Assessment is a critical and often threatening experience for many of the social justice groups. There are two points that flow from this:

- the assessment process should be used as a means for providing constructive feedback as to problem areas for trainees;
- a range of assessment methods may be necessary to accommodate literacy and other difficulties. Some alternatives to print based assessment must be available.

4.2.6 Program content

Open learning provisions in relation to course content may also enhance access to training. The skills supermarket concept at the National Centre is one way for non-trade participants to build up specific competencies.

Communication skills is an important component for work based skills and a prerequisite for more advanced skill training. It is important that this is incorporated within course content so that participants understand its career related relevance.

5. Recommendations

These and other findings were incorporated within the recommendations in our report. There are two final issues that need to be stressed, namely:

- The definition of standards and course design are critical in terms of social justice implementation within training. There is a danger that in focusing on outcomes in the course design too little attention is given to the needs and role of the learner.
- The issues of access and participation are not restricted to the social justice groups identified in the original project brief. If it is noted that more than 70% of adult Australians have not completed the highest level of secondary school and that many of these have no formal vocational training, the training strategies identified in this project can be considered as being relevant for a large group of people.

TRANSITION ASSESSMENT ARRANGEMENTS AND DEVELOPMENTS FOR THE BUILDING AND CONSTRUCTION INDUSTRY

Joseph Zonneveldt - National Building and Construction ITC

Section 1. Background to industry reform in the building and construction industry
See OHT 1, 2 and 4.

Section 2. Transition
See OHT 5, 6, 7, 8, 9, 10 and 11

- Each system is composed of Fields of Work. For example, Plumbing (Services); Site Preparation (Structures); Plastering (Finish and Fitout).
- Targeted to stand till April 1992.
- All workers will be issued with a Registration Card related to their skill level.
- Upward movement is based on:
  - competency in general, common and specific skills;
  - assessments against industry standards (OHT 7 is an example of a National Industry Standard endorsed by NBCITC and NTB).

Section 3. Long term assessment
See OHT 10, 11.

- Assessment (and training) will be competency based.
- Flexible entry and exit points.
- Trials have been conducted on transition assessments based on 80% assessment performance.

NBCITC

Structural Efficiency

- 1987 National Wage Case
- two tiered system
- pay rises based on productivity

- 1988 National Wage Case
- career paths
- multi-skilling
- broadbanding of awards
- flexible work patterns

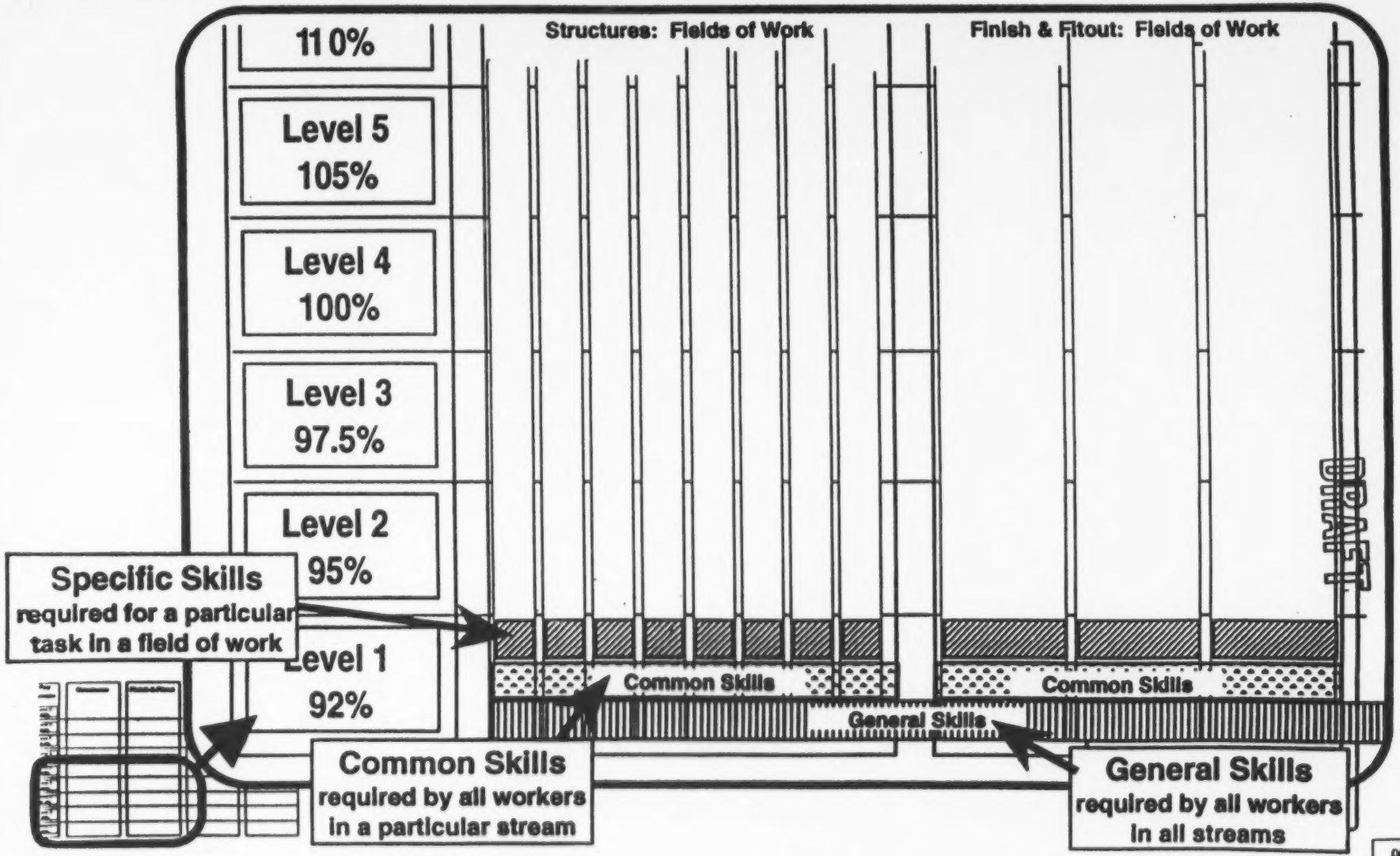
OHT 1

Skill Streams

- logical groupings of fields of work
- relate to stages of project construction
- four streams
- structures
- finish and fitout
- services
- civil operating

OHT 2

General, Common and Specific Skills

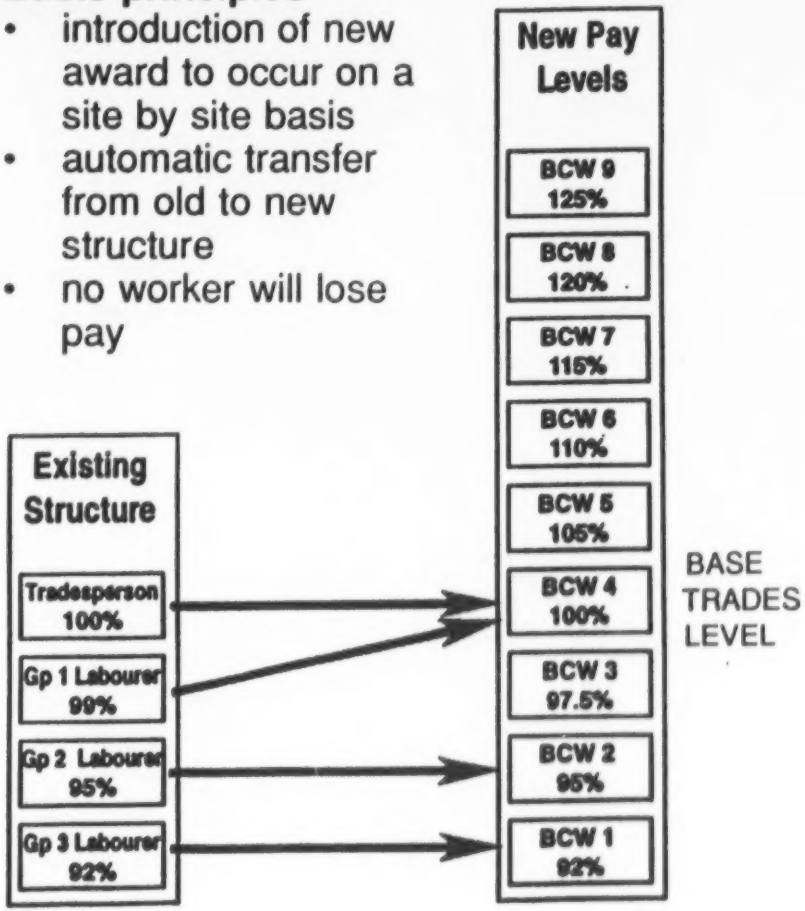


NBCITC

Transition to the new award

Basic principles

- introduction of new award to occur on a site by site basis
- automatic transfer from old to new structure
- no worker will lose pay

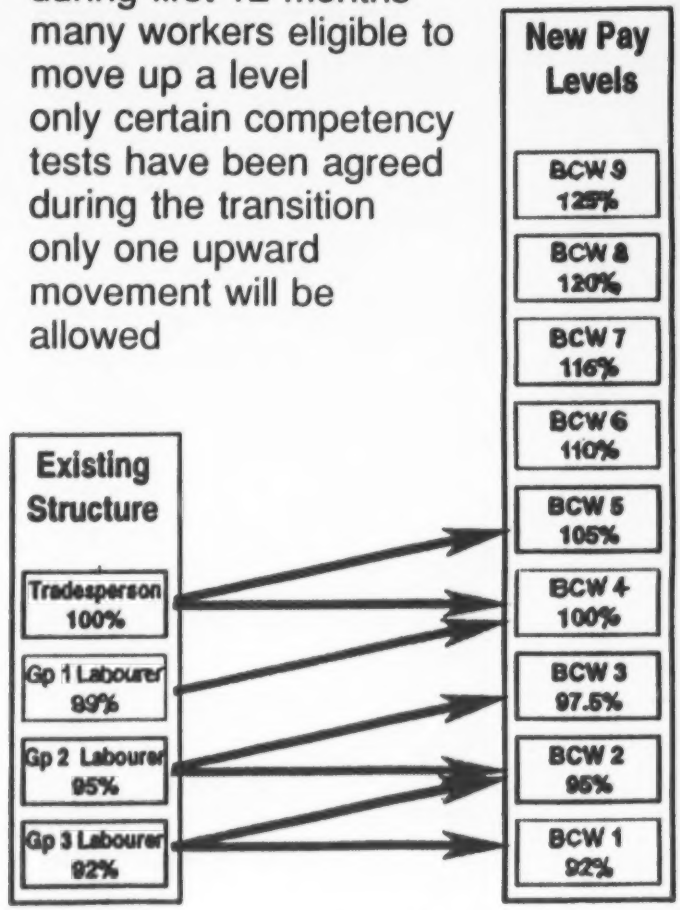


76

OHT 5

Transition period

- during first 12 months
- many workers eligible to move up a level
- only certain competency tests have been agreed during the transition
- only one upward movement will be allowed



77

OHT 6

NBCITC

National Building & Construction Industry Training Council

INDUSTRY STANDARD

1. Standard identifier
2. Stream: services
3. Field: draining
4. Level of competency
5. Unit of competency: drain installation

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
6.	Calculate the materials	•	The quantity and type of piping and fittings are calculated from design drawings and specification
7.	Set out, position of drain system	•	Set out complies with job drawing/ specification and state regulatory authorities' requirements
8.	Excavation of trenches	•	Site investigation and planning required for excavation and maintenance or trenches carried out in accordance with appropriate regulations or job specification
9.	Pipelaying	•	Pipe and fittings installed to the requirements of the appropriate code, regulation or specification
		•	Manual lifting and handling equipment is operated correctly and safely in accordance with state regulatory authorities and OH&S requirements

OHT 7

NBCITC

ASSESSMENT SPECIFICATION

1. Standard identifier
2. Stream: services
3. Field: draining
4. Level of competency
5. Unit of competency: drain installation
6. Element of competency: set out position of drain

7. Conditions

Given actual or simulated on-site conditions, the candidate will be provided with:

- Plan of a single storey dwelling;
- The drainage plan for this building;
- Measuring and levelling equipment; and
- Timber pegs.

8. Assessment specifications

The candidate will:

- Determine locations of main and branch drains and indicate their locations with pegs;
- Determine depths at foot and head of main drain and at heads of branch drains; and
- Record these depths on drainage plans.

9. Measures of performance

- Compliance with all relevant regulatory requirements Yes/No
- Location of main drains to a tolerance of ± 5 mm Yes/No
- Locations of branch drains to a tolerance of ± 5 mm Yes/No
- Set out of trench excavation depth at:
  - head and foot of main drain to a tolerance of ± 5 mm Yes/No
  - head of branch drains to a tolerance of ± 5 mm Yes/No
    considering - specified minimum cover
    - diameter of pipe socket
    - fall of land
    - specified fall of drain
  - Location of drain to be clearly indicated with pegs Yes/No
  - Depth of trench at head and foot of main drain and at heads of branch drains below datum to be clearly indicated on drainage plan (tolerance ± 5 mm) Yes/No

10. Assessment instructions

All measures of performance must be achieved as stated.

OHT 8

NBCITC

Different approaches to assessment

- interview
- written test
- observation at the workplace
- structured practical test:
  - on-site; and
  - off-site
- formal examination
- combination of all or some of above

Assessors

- may be flexible in their choice of approach, but
- must adhere to industry assessment specifications

OHT 9

Who conducts competency assessments?

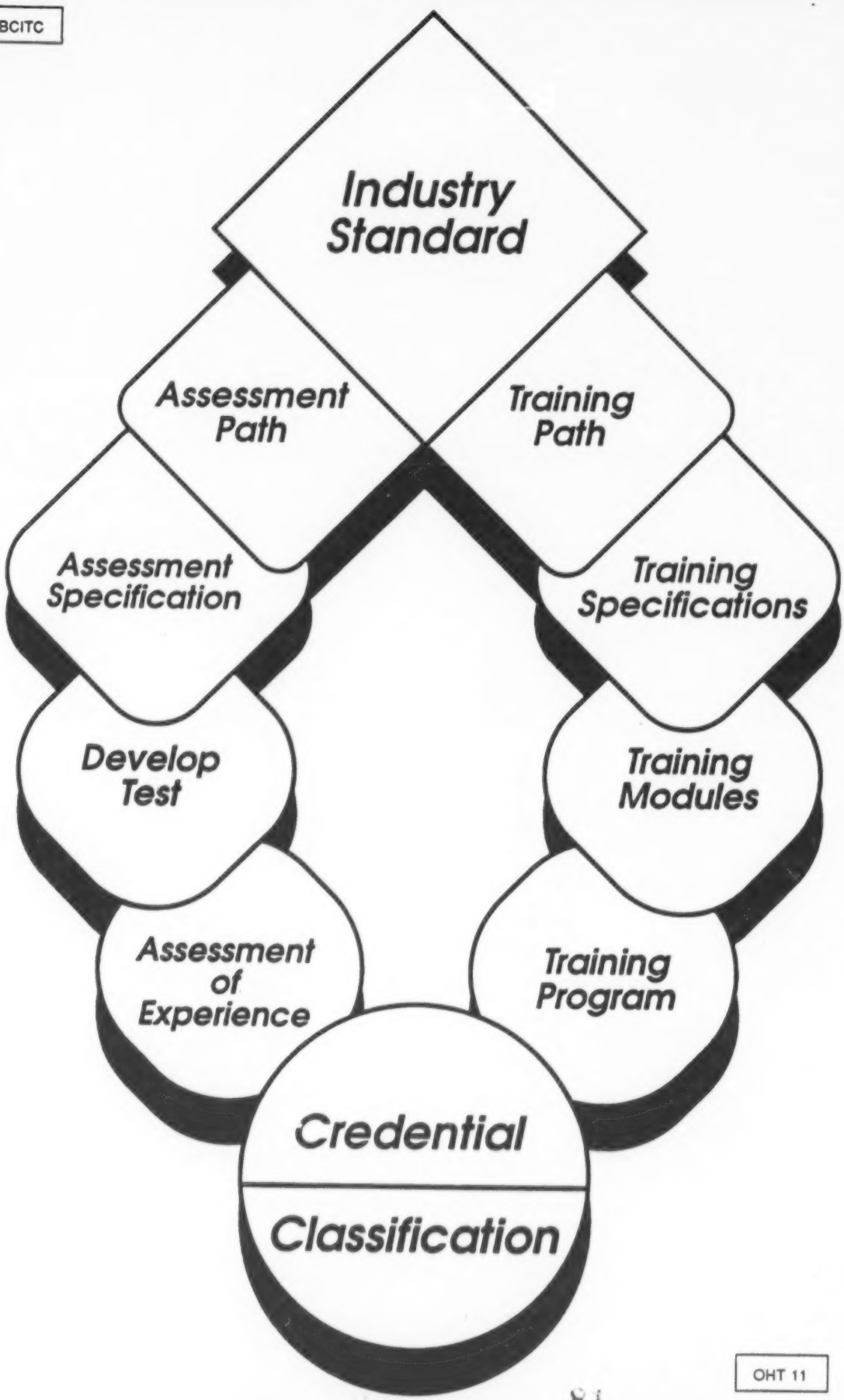
- fellow workers
- leading hands
- supervisors
- trainers
- union officials
- managers
- assessors from outside workplace
- TAFE teachers

Minimum requirements in building industry

- acceptable to both management and workers
- appropriate knowledge
- good verbal and written skills
- completed a training course (4 days)

OHT 10

NBCITC



OHT 11

81

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